THE NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

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Looking Forward

OF MUCH more serious import than administration is willing to concede is the ever widening breach within the profession between the teacher and the administration. The movement is not new. It has been making headway ever since the war. In recent summer meetings of the National Education Association these differences have been progressively emotionalized and vocalized. Unless these conflicts are quickly harmonized, they will lead to the breakdown of our present professional organizations and the complete disintegration of the fine professional spirit and solidarity that have heretofore been so characteristic of public education in this country.

It is of no avail for our professional executives in state and national office to attempt to laugh away these deep-seated differences by referring to these vocal protests as merely the reaction of the "lunatic fringe" and of "highly unstable middle-aged teachers." The type of platform discussion that disgraced the Atlantic City and Chicago meetings (please remember that the lay world looks on these gatherings as representative of the profession) cannot be condoned or ignored. At the present rate of growth the so-called "classroom teacher movement" will boast an active and aggressive national enrollment of more than half a million within five years. It is a movement beginning at the roots and rising on the wave of an emotion of fear and unrest. It resembles a crusade.

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What are the reasons for these differences and professionally disintegrating outbursts? Do they represent irrationalism and a sex battle as many fondly believe? I think not. To any student of administration who is willing to look behind the scenes instead of merely praying in front of the pillars of administration, the reason is obvious. In the earlier development of administration there were two tendencies. One from college and university carried over into certain phases of public education the concept of democratic administration based on the "colleague principle." The second, derived probably from church tradition, brought a more patriarchal type of relationships and authority into being. Careful study of the evolution of city school organization will show these two influences operating side by side with greater democratic expression in the earlier secondary schools and much more autocratic regimentation in the elementary schools. Today, except in isolated instances, the "colleague principle" in administration has disappeared from both public education and the institutions of higher learning.

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The discovery of education by business and by the chamber of commerce in the first decade of this century has caused the executive to pattern himself and his activity in terms of adapted principles of business organization rather than to follow the scholarly tradition. As a result, there has gradually developed the same unfortunate cleavage that exists in industry, the creation of activity consciousness and the emergence of two groups—labor and management.

Instead of representing a fine spirit of cooperation and confidence suspicion and mistrust have gradually developed. Teachers, unable to express themselves or maintain rational independence within organization, have resisted this administrative dominance and coercion by forming small nucleuses for what they consider their own protection. Hence the administrative predepression drives for teacher affiliation with chambers of

commerce have been followed by the counter movement of teachers' unions, independent and also affiliated with the American Federation of Labor. Both tendencies are expressions of class cleavage and both have their essential weaknesses in relation to public education which is functionally an activity independent of all special class interest within the state. In addition there are today numerous underground teacher organizations of which many administrators are not even aware.

Paralleling these movements, is the already obvious revolt within the state organizations and the National Education Association. There is no longer any possibility of disguising it. Falling memberships in state and national organizations, despite administrative pressure, are eloquent barometers.

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What is the solution? Must this cleavage go on until our profession is completely disintegrated and wrecked? Is there even at the present time a way out?

State councils of educational leaders in which the classroom teachers are fully represented might easily be developed. Let them sit behind closed doors and discuss in perfect freedom the problems and conflicts that exist, and then harmonize their differences intelligently. The result may necessitate changes in state and national organization. It is much wiser to make these for the sake of a return to a well integrated profession than to wait with Bourbon stubbornness until present structures have completely disintegrated. Other fundamental changes in actual administration must inevitably follow. The activity of education is not in any sense related in method, performance or product to industrial practice and must turn from the "pushbutton" road to an intelligent expression of the only manner in which intellectuals can work together effectively—the progressive development of democratic plans and procedures and the revitalization of the colleague principle.

U. S. Commissioner of Education, George F. Zook, has criticized the various accrediting agencies which have grown up to maintain standards in high schools and colleges. In the course of a recent address Doctor Zook said:

"These organizations have developed regulations which though well intended have too greatly restricted procedure and too little emphasized quality of performance. To conduct the affairs of any social organization including a college or university according to a long list of rules laid down by someone outside of the organization may easily become an expensive method of procedure. Faculty, students, administrative staff, financial support, buildings and equipment always vary so greatly as to minimize the virtue of uniform machinery. Accrediting agencies have rendered and still continue to give a great service to the cause of education but they should not interfere with the natural development of educational units."

Commissioner Zook has courageously placed his hand on an extralegal activity that has grown to large and possibly questionable size. It is one of the peculiarities of public education in the United States that, although full and complete legal structure has been authorized and devised to carry on the program of popular education, the tendency has been to short-circuit or ignore the legal means and to build up a number of large extralegal appraisal structures. One might go a little further than Commissioner Zook and say that the time has come to reexamine all of these extralegal agencies in light of function. As advisory and public opinion forming groups they undoubtedly have a large field. As extralegal dictators within either a state or a section of the country, their status is exceedingly dubious.

EARLY reports from the university and college summer sessions indicate a decrease in enrollment varying from 20 to 40 per cent, with a probable average of 30 per cent when the totals are finally compiled. Added to the 1932 decline, this drop is a highly significant outcome of the depression's effect on public education. It is not a decline in interest. Absolute economic incapacity forced many principals and teachers to remain at home where they might easily dispose of their "scrip" for living essentials.

Since this condition will probably continue for at least another summer, it might be desirable to create some means whereby higher institutions could cooperate to a greater extent with these depression hit teachers and clear some of the local "paper" or tax warrants for both tuition and living expenses. The important work of keeping teacher and administrator in close touch with new developments in education should not suffer so heavily because of the delicate financial conditions. The stimulation and increase in both efficiency and morale that are provided by our university summer sessions should be maintained even at some sacrifice to the higher institutions.

The Editor

Retarded School Children Improved by Glandular Treatment

Results of Detroit experiment indicate need for serious revision of current ideas and practices concerning certain types of the mentally handicapped

By CARLETON JAMES MARINUS, M.D., Detroit

IN 1901 Detroit started classes for mentally defective children, which now register over 4,000 mentally retarded children out of a school population totaling 182,000 children. The psychological clinic was organized in 1911. At present all children with intelligence quotients between 50 and 75 are cared for by this department. With certain exceptions, those with intelligence quotients below 50 are excluded from the schools and recommended for placement in appropriate institutions. Those with quotients above 75 are taught in the Z sections of the regular grades.

Many Statistics Have Been Gathered

During this twenty odd years an enormous volume of information regarding the progress of retarded children under special methods of teaching has been recorded. The hereditary factor in mental retardation has been studied. The place in society which the retarded child reaches as an adult, and the frequency and types of delinquency observed as he matures, have been observed. While this information has not been completely digested, it is obvious that the retarded child becomes the adult who is most likely to develop criminal tendencies and to require the continued assistance of social agencies for support. Numerous attempts have been made to determine the causes of the mental retardation and to improve the status of the backward child by various methods of treatment. Ordinary medical care has had but little effect on the progress of the individual child or on the statistics as a whole. The rôle of focal infections, syphilis, defective sensorium, such as eyes and ears, seem to play a small part.

In 1915 Theodore A. McGraw, Jr., a Detroit endocrinologist of note, started a program to determine the frequency of endocrine disturbances in retarded children. Using the relatively crude diagnostic measures at that time available, he found evidences of endocrine disturbances in approximately 15 per cent of the children studied. Certain of the positive cases received appropriate treatment with striking evidence of improved ability in their school work. This work was unfortunately terminated by Doctor McGraw's untimely death.

In 1928 the common council of Detroit made an appropriation for investigation of medical problems in the Detroit schools, under the administration of Doctor Burt R. Shurly, Doctor Angus McLean and Frank Cody, superintendent of schools. In the fall of 1928, Dr. O. P. Kimball, Cleveland, and I were authorized to undertake the experiment. Doctor Kimball retired from the experiment in 1930.

We assumed at the beginning that any endocrine disturbance sufficiently marked to cause mental retardation must be accompanied by sufficient deviation from normal physical development to make possible a definite diagnosis of the endocrine disturbance without reference to the mental development of the child. With this hypothesis as a starting point a cursory inspection of all the children in special classes was made, observing the facial characteristics, body proportions, height and weight as compared to normal for the child's age, condition of the skin, hair and nails and evidences of abnormal puberty. Those children possessing evidence of deviation from normal physical development were brought into the clinic for more intensive study.

Thyroid and Pituitary Glands

In the clinic a careful family and birth history were taken, body measurements were made to record the growth and physical proportions, and disturbances in the facies, teeth, skin, hair and nails and fat distribution were recorded. Basal metabolism tests, Wassermanns and blood counts were obtained as indicated.

Upon the basis of this information the diagnosis

was made and it was soon apparent that the only glands requiring serious consideration were the thyroid and the pituitary. With the consent of the parents the positive cases were placed upon treatment as indicated. The results of treatment were determined by recording changes in the physical condition, changes in school progress and changes in the intelligence quotient.

After two years certain conclusions were reached that justified a new conception of the problem and a new method of approach. The cases of pituitary deficiency had shown no real improvement upon treatment insofar as the intelligence itself was concerned. There was an alteration of personality with some degree of increased achievement in school work, but not sufficient, in our opinion, to justify the large expense of pituitary medication. The pituitary cases were therefore eliminated from the clinic.

Original Hypothesis Was Wrong

Our original hypothesis that an endocrine disturbance capable of retarding mental development must be evidenced by physical maldevelopment, was incorrect. There were many children with thyroid deficiency amenable to successful treatment who were apparently perfectly normal in their physical development. This made it advisable to discontinue the inspection in the schools and to consider all cases of mental retardation as possible thyroid deficiencies until proved otherwise. It was determined, however, that the more severe deficiencies were accompanied by physical signs so that the child with an abnormal physical development could be considered an urgent case.

We also found that the earlier the diagnosis was made and adequate treatment supplied, the better were the results obtained, and our efforts were therefore concentrated upon the younger children.

The results of the first two years' investigation were reported in a paper read before the Association for the Study of Internal Secretions in June, 1930.[1] The second half of the work was redesigned to afford a more practical working technique with less emphasis upon the purely research side of the problem. During the past two years we have seen all cases referred to the psychological clinic because of behavior disturbances or of poor school work. In addition, we have seen all children referred by school physicians and nurses because of developmental or physical abnormalities.

Table I indicates that in the latter half of the experiment many cases of thyroid deficiency were discovered that were missed entirely in the early phases of the work. Forty-one per cent of all patients examined showed evidence of thyroid deficiency with or without some other complicating disorder. This fact should not be taken to indicate that 41 per cent of all retarded school children are suffering from thyroid deficiency. In spite of the fact that no attempt was made personally to select suspicious cases, a large number of children were examined by request of different agencies because of some indication of glandular disturbance. In order to obtain a true percentage it would be necessary to examine every single child in the retarded group.

For convenience in presenting the results pituitary deficiencies will be considered first. The pituitary gland consists of two lobes, an anterior lobe, which controls growth, and at puberty, sexual development; and the posterior lobe, which is one factor in the regulation of carbohydrate metabolism. Pituitary deficiencies may, then, show a delay in growth, a delay in sexual maturation, a characteristic obesity or some combination of the three. The child with pituitary deficiency may have a normal intelligence and may appear in the retarded group because of some other factor reducing intelligence or because of poor school progress in spite of a normal intelligence. He shows a characteristic personality disturbance. He is a physical coward, infantile in his emotional reactions, prefers association with younger individuals. He is unable to compete in the classroom or on the playground and fails to achieve results in his school work because of his personality disturbance.

TABLE I—DISTRIBUTION OF CASES EXAMINED

A. Work Prior to 1930	
Inspections in the schools	3,585
Cases studied in the clinic	903
Endocrine deficiencies	663
Percentage of total examined	18.6
Percentage of cases in clinic	78
B. Work Subsequent to 1930	
Cases studied in clinic	939
Endocrine deficiency	473
Percentage of cases in the clinic	50
Total cases examined in the clinic	1,842
Total endocrine deficiencies	1,140
Total uncomplicated thyroid deficiencies	439
Additional thyroid deficiencies with complications	327
Total thyroid deficiencies	766
Percentage of number examined	41

In the treatment of these cases, large doses of pituitary substance were given by mouth for periods of time up to two years. No effect was noted on the intelligence quotient of any child under pituitary treatment. Many cases showed a definite alteration of the personality in the direction of increased maturity, frequently indicated by gradual improvement in their school achievement records. There was some tendency to increased growth in

[1]Endocrine Dysfunctions in Retarded Children and Their Responses to Treatment, by Carleton J. Marinus, M.D., and O. P. Kimball, M.D., Endocrinology, September and October, 1930, pp. 309 to 318.

the undersized case and to increased sexual development in the case of delayed sexual maturity. If these physical changes were noted, the personality change was more marked than in the case in which no physical change occurred. The percentage of positive results was small and the degree of improvement was so inadequate, in view of the cost of pituitary medication, that it was felt that the pituitary case did not justify the treatment at public expense except, perhaps, in certain extreme cases of disturbed personality.

Results With Thyroid Cases

Thyroid deficiency in children falls into two classes, the cretinoid and the *forme fruste* types. The cretinoid type is well known to the medical profession. In our cases the diagnosis had frequently been made before the child was seen by us. The cretinoid child is usually overweight at birth, shows a large tongue, pot-belly, a tendency to hernia, dry skin, constipation, delay in teething, walking and talking, undergrowth and slowness in physical and mental reactions. On reaching school age this child presents a slow phlegmatic personality, low emotional level, sluggishness in mental and physical activity, wide mouth with thick lips, dry skin, widely spaced eyes, short extremities, square hands with short fingers and a low intelligence quotient. The basal metabolism is always low. The mental deficiency and the deviation from normal in physical appearance may be marked or of only moderate degree. The true cretins, in whom the thyroid is entirely without function, are not seen in this group as their intelligence is much below 50 per cent and they are automatically excluded.

The *forme fruste* type is much more difficult of diagnosis. The more marked cases give a history of some disturbance in the maternal health during pregnancy, frequently associated with some obvious disturbance in thyroid function. The baby is frequently, though not always, overweight at birth. There is usually delay in teething, walking and talking. The child is frequently nervously unstable, showing disturbances in coordination and in speech, and marked difficulty in the use of the finer muscles. He is usually considered frail and presents difficulties in nutrition and increased susceptibility to infection.

He reaches school age, however, with no suspicion of mental retardation. His failure to do normal school work is usually attributed to lack of sympathy on the part of his teacher for his physical handicap or to lack of effort on his part. On analysis, he shows a lowered intelligence quotient and a very short attention span due to early mental fatigue on effort. His basal metabolism is lowered but is difficult to obtain owing to his nervous instability. The *forme fruste* type of hypothyroidism represents about two-thirds of the entire hypothyroid group.

Before passing to a statement of the results of treatment, I wish to interpolate some points regarding the relationship between this thyroid problem and goiter. Ten years ago, a study of the entire school population in Detroit demonstrated that 37 per cent of all school children between the ages of ten and fourteen years showed the presence of a soft colloid enlargement of the thyroid, the so-called physiologic or puberty goiter. At that time the use of iodin salt became general in Detroit and throughout Michigan. In our present study less than half of 1 per cent showed this type of thyroid abnormality.

In the group of thyroid deficiencies, particularly of the *forme fruste* type, we found about 5 per cent with the congenital type of thyroid enlargement characterized by firm, irregular nodules with or without the presence of a persistent pyramidal lobe. This type of goiter is neither prevented nor benefited by the administration of iodin. It is apparently the expression of the damage done to the thyroid gland of the developing fetus by an abnormal state in the thyroid of the pregnant mother. This abnormal condition of the mother during pregnancy is an important etiologic factor in the production of hypothyroidism and mental retardation in the child.

The Effect of Thyroid Treatment

In contrast to the results of pituitary treatment, the cases of thyroid deficiency have shown a definite, if not spectacular improvement. The effect of treatment can be measured by estimation of three separate factors: (1) physical condition, (2) progress in school, (3) intelligence quotient. Of the 347 cases of pure thyroid deficiency that have been under continuous treatment for one year or more, 340 showed definite improvement in their general physical conditions with alterations of the special signs of thyroid deficiency, if they were present. In the cretinoid type there was increased growth rate, occasionally doubling the normal growth rate at the child's age. There was marked increased activity, both physical and mental, improved coordination, disappearance of the excessive subcutaneous infiltration, increased alertness in the facial appearance, correction of the anemia and other improvements. In the *forme fruste* type there was marked stabilization of the nervous overactivity, increased appetite with corresponding gain in normal weight, decreased fatigableness, increased attention span.

The school progress was measured by monthly reports from the child's teacher. In order to obvi-

ate the factor of personal bias, reports were obtained regarding all the children examined, regardless of whether treatment was supplied or not. Thus, the teacher did not know which child was treated and which was carried as a control. Of the 347 under treatment for one year or more, 239 showed definite improvement in their school work. In the cases that were under treatment for two years, the degree of improvement was definitely more marked in the second year of treatment. Of this group the improvement was so marked that forty-one cases were returned to the regular grades.

I. Q. Drops From Year to Year

The hypothyroid child shows a rather characteristic curve in the development of intelligence. There is a tendency for the I.Q. to fall from year to year with a loss of 20 to 30 per cent during the entire elementary school life. This is in contrast to the curve observed in the hereditary feeble-minded child in whom the quotient tends to remain stationary throughout the school life with a spontaneous rise occurring at or about puberty. Repeated intelligence tests have been obtained in 190 of the 347 under active treatment. Twenty-four or 12.6 per cent have shown a rise in I.Q.; 150 or 78.9 per cent have shown a stationary I.Q.; 16 or 7.8 per cent have shown a falling I.Q. It will be observed that this is a reversal of the normal trend in these cases, more than three-quarters of them maintaining normal mental development with less than 10 per cent failing to develop mentally at a normal rate.

In the course of our work we have had occasion to study special groups of children presenting some specific type of disturbance. During the past year we have examined a group of 66 supposedly normal children, handicapped by disturbances in speech, with the following observations: thyroid deficiencies, 40 or 60 per cent; pituitary dysfunctions, 11 or 17 per cent; birth injury, 2 or 3 per cent; no diagnosis possible, 13 or 20 per cent.

In the forty placed upon treatment the following changes were noted: improvement in physical condition, 33 or 82.5 per cent; improved school progress, 18 or 45 per cent; marked improvement in school progress, 7 or 17 per cent; marked improvement in speech progress, 20 or 50 per cent; little improvement in speech progress, 17 or 42.5 per cent; no improvement in speech progress, 3 or 7.5 per cent.

In recording the factor, improvement in speech, the expected improvement of a child in a speech class is taken as normal so that the improvement noted is in excess of the normal expectancy.

This group is of especial interest because the children were thought to have normal intelligence and to be handicapped only by the mechanical difficulty in speech. The physical condition was considered normal and they certainly would not be recognized by the casual observer as examples of thyroid deficiency.

It is interesting to observe the effect of thyroid extract in other conditions in which the thyroid is not implicated. In true hereditary feeble-mindedness the child is unable to take more than a minimal amount of thyroid without the development of signs of overdosage. In no case has there been any improvement in school achievement or in intelligence upon the prolonged administration of thyroid. The lack of benefit from thyroid treatment in this type is in striking contrast to the results obtained in the hypothyroid group. The difference in dosage tolerated is so definite that it might well be used as a method of diagnosis between the two conditions.

The cases of pure pituitary deficiency are frequently able to take fairly good sized doses of thyroid without signs of overdosage. This may be followed by loss of weight in the obese type, but there is no corresponding improvement in intelligence or in achievement.

Cases of birth injury show a very small tolerance to thyroid and will actually be made worse rather than benefited by thyroid treatment, owing to an increase in the nervous irritability. This is an important distinction as many cases of birth injury are mistakenly considered gland disorders.

Mongolian Idiocy Is Common

Mongolism, or Mongolian idiocy, is seen rather commonly in any group of retarded children. The severe cases are automatically excluded because of their low intelligence quotients. The milder cases, however, represent a fairly large proportion in the special grades and are frequently considered to be examples of thyroid deficiency. Mongolism is frequently complicated by thyroid deficiency, and if so, the case will improve under thyroid treatment. At the end of four years we may say definitely, however, that in no case has the underlying mongoloid picture been altered by thyroid treatment.

We have given thyroid extract to a number of children under par physically, showing the effects of long continued infections, chronic anemia, nephritis. It is possible to produce a certain degree of improvement in their physical conditions by minute doses of thyroid extract in many of these cases. While an improvement in the school work corresponding to the improved physical condition occurs, it is apparent that in these cases the thyroid is acting as a nonspecific tonic and that the case is not one of true thyroid deficiency.

It is not uncommon to find that as a child under treatment approaches puberty the required quantity of thyroid extract decreases until as puberty is well established, further treatment is unnecessary. In our series fifty-nine cases have been discharged with a normal basal metabolism and evidence that the thyroid is functioning normally. This result is obtained only if a child is under adequate treatment during the prepubertal period. If the case is not recognized and treatment not started before the onset of puberty, the thyroid deficiency with its resulting handicap, becomes permanent.

The establishment of an endocrine clinic involves first the selection of a physician interested in the problem and qualified by experience in the diagnosis of glandular disorders. To him should be referred all the children who consistently fail in their school work. The basal metabolism test and x-ray examination of the skeletal growth centers should be used freely in all doubtful cases. In large school systems a centrally located, permanent clinic will be necessary. In smaller communities one of the charity clinics already in operation may be utilized.

The cases showing evidence of thyroid deficiency are placed under treatment, starting with a small dose (usually one-half grain to one grain), with an increase in the dose until the maximum quantity tolerated without signs of overdosage is reached. This dosage is then continued until the onset of puberty determines a smaller dosage or the cessation of treatment.

A system for recording the school achievement and Binet tests as indicated should be incorporated in the clinic. Full cooperation between the family physician and the social agencies having the child under observation is essential. Failure to solicit the family physician's aid will inevitably hamper the work of the clinic. It is well to have the approval of the local medical society before starting the work.

Cost Per Patient Is Low

In Detroit we have found it necessary to supply the thyroid without charge to indigent and semi-indigent families. When purchased in large quantities this does not materially raise the budget. The cost of the clinic will naturally depend upon the number of technical and clerical assistants required and the salary paid the physician. We have been able to keep our costs below $2 per patient per school year.

It has been demonstrated that 41 per cent of the retarded school children examined in our clinic are suffering from a disturbance of function of the glandular system and that diagnosis and adequate treatment of such a deficiency bring about measurable improvement in their school achievement and physical conditions, and permit normal mental development from the time treatment is started. True inherited feeble-mindedness and the retarded mental development that follows birth injury are not benefited by this treatment. A simple plan for the recognition of and the treatment of these cases, together with a system for determining the improvement obtained, is presented. The low relative and absolute cost of such a program is noted. It is maintained that every retarded child should have the privilege of such examination and treatment. It is believed that the cases requiring such a service can best be selected through the educational system and that the burden of supplying this service, therefore, rests upon the educational system.

Over Three Thousand Hot Lunches Served for $39.54

In Los Alamos, Calif., the board of education used to pay a cook $30 a month to prepare hot school lunches, and the costs were met by a nickel from each child who took luncheon and contributions from a local women's club. Of the ninety-five children in the school, about half come from the ranches.

This year money for lunches was lacking and at best only about half of those who lunched at school had been able to buy the hot food. So under the direction of the teachers it was decided to see what could be done without money. When the children are assembled in the dining room the teacher announces, for example, "Tomorrow we shall need two gallons of milk. Who can bring some?"

Nearly every woman in the district has volunteered her turn at helping in the cooking, giving two or three days during the four winter months when the hot lunches are needed. Most of the cooking is done at the school, although occasionally dishes, such as soup, that require prolonged cooking are prepared in the homes and brought over by the volunteer of the day when she comes at eleven o'clock.

The food is served cafeteria fashion. Teams of children act a week at a time as servers, clearers, dishwashers, sweepers and the like, and other children are monitors for hand washing. Every child who cannot go home to lunch gets hot food without paying. The menus are made up weeks in advance but changed when necessary to take advantage of donations.

For 3,267 meals the cash outlay necessary to supplement donations was $39.54, contributed by the community clubs and other donors.

A play field adjoining the school grounds makes an ideal sport park where pupils and their parents may congregate to witness athletic events.

Cultural Values of Landscaping

An Article by JENS JENSEN,

I REMEMBER well my introduction to the beautiful campus at Wisconsin's great university and the two hours I spent with the professor of literature on the bluffs of Lake Mendota which stretched out before us in all its midsummer beauty, enhanced by distant hills and purple ridges. I was moved by this spiritual revelation and those hours have left an unmistakable note in my life.

I also remember well my first visit to Culver Military Academy on Lake Maxinkuckee—less dramatic than Mendota, perhaps, but equally poetic and lovely. Years have gone by. Changes have come over the campus at Culver. It now rivals the campus at Madison in poetic loveliness and friendliness, in simplicity and peace. Fortunate indeed are those who attend these schools.

This recalls to me the little college I attended in my youth, situated in a friendly natural landscape. Many of the things that were taught in the classroom have long been forgotten, but the inspiring beauty of the college grounds in their sympathetic environment will remain in my memory to the end of my days as one of the influences that molded my young mind into an understanding of the spiritual forces of God's out-of-doors and led me onward to a higher and finer life.

My own home, out on a point facing the sea over which my ancestors had gone westward to dare the hardships of the unknown, must have awakened my love for the out-of-doors. The views over water and land, the distant horizon, the mystery of the sea, the gentle waving lands, spelled romance and beauty. Who can doubt that such an environment

To know and understand growing things stimulates the friendly and loving impulses of mankind. Here lies the path to a finer cultural life.

Are Important to the Community

Landscape Architect, Ravinia, Ill.

had a decided influence on my youthful mind just as it had influenced my ancestors?

A number of years ago my advice was sought in the matter of placing a high school. I was to be the umpire in a disagreement between the architect and the principal regarding the removal of some oak trees that interfered with the proposed school buildings. I decreed that the oaks were to remain untouched. They had rights that dated back to a time long before the white man had arrived. They had a story of our own native land to tell to those who attended the school. They gave of their beauty and their cooling shade to the school yard.

My story was that a squirrel had buried several acorns at this particular place. They were forgotten and were permitted to sprout and grow into trees. Many a forest fire and many a storm had these trees survived successfully from their sapling days until they became old and marked by the ravages of the years. Indians and pioneers had camped under their shady heads and the cradle song of the squaws could still be heard through their rustling leaves in the light breeze. Tramping feet of early voyagers had passed by. The songs of laughter of the adventurous pioneers, and now the merry voices of children, voices of today and voices of tomorrow, would be heard for generations to come. For more than two hundred years these trees had lived and enjoyed God's sunshine and for many more years they would give their beauty and lovely shade and their rich story to those who might visit this school.

As a boy, I helped plant a memorial oak tree in our school yard. It has grown to a fair size and

will continue to grow until it reaches full maturity several hundred years hence. What a source of delight and joy for the children of the future who will play under its patriarchal head, learn its story and receive an understanding of the spiritual and cultural value of this tree. Like a wonderful book, it will impart its wisdom to coming generations. This oak tree will influence class after class as much as anything the school curriculum will have to impart to its students.

I have tried, by telling some of my own experiences, to show the influence of beautiful school grounds. I feel that they will have the same influence, to a larger or smaller degree, on every child that is fortunate enough to attend a school surrounded by beautiful grounds. It is not only a matter of a pleasing school yard. Well planned school grounds add to the beauty of city, town or village. Yes, and to the beauty of rural country. They become a living art center. Every school yard —the building and its environment—should represent a beautiful note in the city plan.

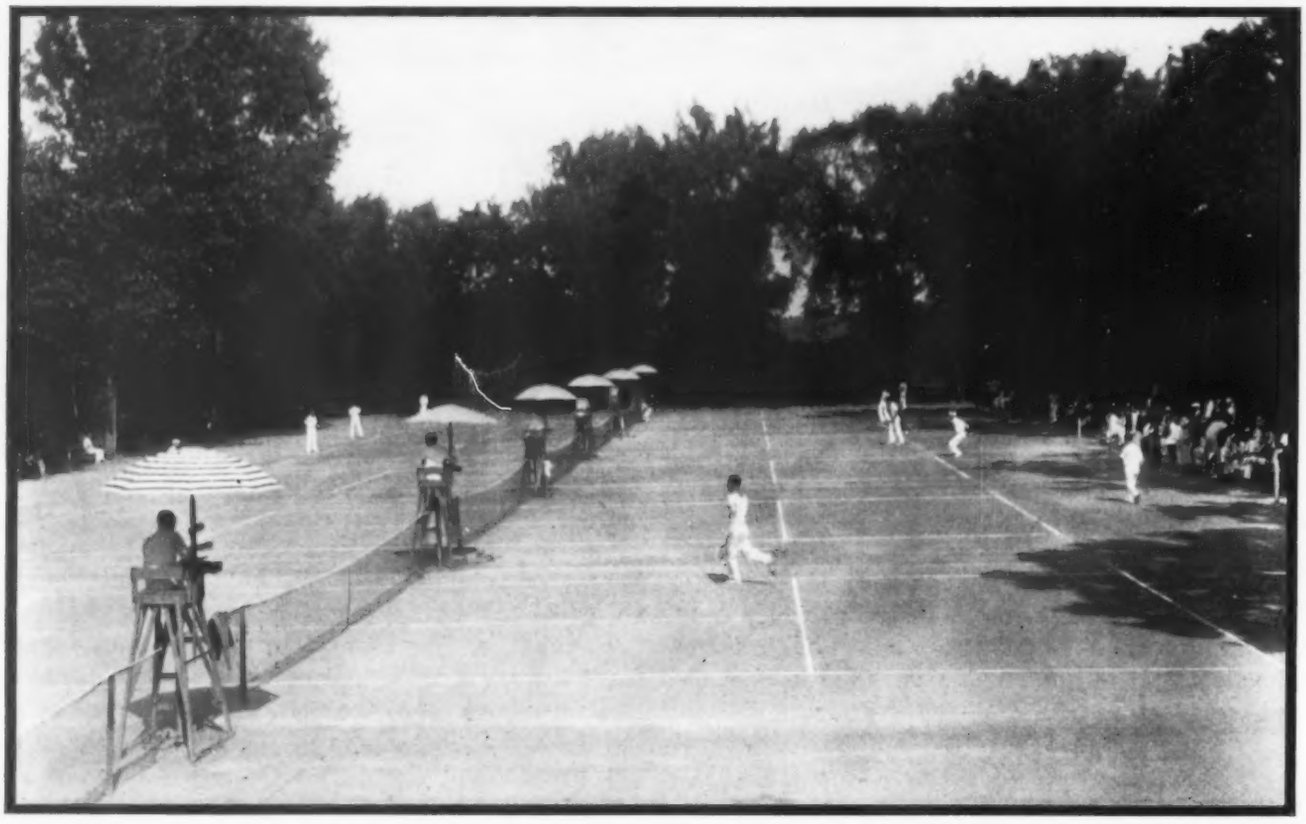
Modern school buildings too often suggest a certain arrogance and dominance which is not only foreign in a democracy like ours, but is often done in a way that creates a false impression of the character of the citizens who planned them.

The building should share its architectural expression with the poetic and softer notes of growings things—something pleasant to look at, something to love and remember as a source of joy and happy days. Beauty and orderliness in school grounds are as essential as a good appearance in the classrooms. These things are educational in themselves and are perhaps as important in normal development of boys and girls as is book learning.

Growing things have a different influence on the mind than do painting and sculpture, for instance. They are living beings like ourselves. They speak their own language. They are surrounded by mystery and they have a message from the infinite. To know them and to understand them stimulates the friendly and loving impulses of mankind and I maintain that there lies the new path to a higher education and a finer cultural life.

School buildings and their surroundings should be works of art, designed by the ablest men in the profession. They are vastly important as an educational factor and the best cannot be too good for the youth of our country. Extravagance is too often seen now. It is usually the result of an ignorance of beauty. Greatness grows out of the simple things of life. It is in their school environment that children are started on the trail of life. Here the spark is ignited. Here children are led onward in their journey to greatness and fame.

Parks are of the highest cultural worth. But they are less important, especially in large cities, than well designed and liberally spaced school



Courts surrounded by a screen of trees and shrubs invite the tennis enthusiast.

Every school yard should represent a beautiful note in the city plan.

parks. Whether in the rural country or in the small towns or villages, school parks have a distinct educational value. To bring the beauty and poetry of living flowers, the nobility and sublimity of trees with their lovely shade and cool retreat into the school yard, into walking distance of every inhabitant in the city, is in itself a revolution that will have tremendous effect upon the whole complex of modern city life.

To feel the sun's healthgiving rays in the modern canyonlike streets, to see the silvery light of the moon, now obscured by artificial lighting, and to see the starry heavens with all their mystery in the heart of a great metropolis is to invite the countryside as an oasis into a soulless complex of concrete and stone. I contend that from eight to sixteen acres of land surrounding each school building should be reserved for beauty and for play. Here the perfume of lovely blossoms, the songs of birds and in the evening the music of the school symphony will increase the health and happiness of our city dwellers and raise the whole cultural standards of city life.

In contrast to the city's straight lines, the school yard park must be planned along natural lines. Nature is all curves, and curves are full of mystery and poetry. Straight lines are often forced. They are often arrogant and showy. They do not represent the deeper and finer feelings of life. The mind of the child must be guided along lines that lead the imagination toward freedom and appreciation of the simple life. An expanse of sunlit meadow surrounded by deep shadows of trees and other growing things gives food for thought of freedom in its breadth and openness. There is mystery in the thicket for the imaginative mind and it is a perfect harbor for many rare and shy plants. A plant, free from interference and climbing over a bit of rock, speaks of freedom and daring.

Plants must be permitted full freedom to grow.

"With branches interlaced like friends."

Clipping and trimming, destroying the beauty that God has given, is out of harmony with truth and love. No real spiritual progress of the human race is found in this thought. One often sees a little colony of trees like friends with their branches interlaced. Should they be separated to stand out boldly one by one? What would be their message to us when torn apart? Love and friendship are expressed so beautifully in the relation of century-old trees with their small and beautiful neighbors that cover the forest floor. Scientifically they belong together, helping and protecting each other. Spiritually they also are one. A friendly, loving group. A little colony of princess pine huddled together for mutual protection, a friendly group in perfect harmony with each other, represents a picture of beauty in the woodland scene. Alone all are lost.

Native plants belong around the school. The child should first know the trees and the flowers that are native to his own homeland, just as he should know his own mother tongue before he learns a foreign one. Native plants speak of the distant past. They are a part of us. We grow up with them and we are laid to rest among them.

A few years ago an American exhibited a little garden in a London flower show. All horticultural London spoke about this exhibit. Even the King and Queen paid it a visit, not because it came from a foreign land but because it was a little colony of native plants representing a simple, harmonious whole without the least expression of show and pretense. It was a beautiful new note in the celebrated London exhibit.

Games of esthetic value should be at home in the school park. Tennis may be relegated to a hidden corner. Only light games should be permitted. Playground apparatus belongs indoors where it is always at the disposal of those that want to use it. Council rings with their pleasant fires for study and story telling, players' hills for dramatic productions under the starry heavens and for music and oratory, pools for the sailing of boats, flower lanes for friendly walks, shady pools for birds and open, sunlit meadows surrounded with flowering things belong to the school park.

Athletic sports should be provided for in specially designed sport parks where thousands can congregate and where the sort of play that calls for strength and endurance may rule supreme. In the rural country a field, adjoining the school building and hedged in with trees and other plants, should be the gathering place of the neighborhood for friendly games on Sunday afternoon. But the school ground itself must be along the line I have described. Some day the little school park of boyhood days will exert its influence for a more beautiful and a more cultural life.

Does a Copyright Mean Anything?

Flagrant pirating of published educational texts by individuals, school districts and higher institutions has reached a serious point; "reproducing" considered a depression economy method

By GUY MONTROSE WHIPPLE, Secretary, National Society for the Study of Education

IN 1931 the National Society for the Study of Education presented as Part II of its Thirtieth Yearbook a report entitled "The Textbook in American Education." On the reverse side of the title page, following the usual notice of copyright by the secretary of the society, there appeared for the first time in this series of yearbooks the statement: "No part of this yearbook may be reproduced in any form without written permission from the secretary of the society."

Only Three Out of Five Condemn Practice

This statement was added after reading in Chapter 10 of the yearbook the discussion dealing with the lack of understanding of or regard for the significance of the copyright, and after noting the figures which showed the attitude of more than two hundred educators and school administrators on the ethics of reproducing copyrighted material for distribution in the schools. Dean Edmonson had asked: "Would it be ethical for a superintendent to reproduce for free distribution to pupils certain pages from textbooks not adopted for use in the schools?" To this query 14.6 per cent of his correspondents said "Yes" while 20.9 per cent more said "It depends," and 5.6 per cent thought the matter unimportant; in other words, only three of five school men (58.9 per cent) definitely condemned the practice.

To get at concrete cases, I invited seven textbook publishers to report characteristic experiences. These publishers, who probably collectively market four-fifths of the school books sold in the United States, have contributed the instances I shall cite. Nearly all the instances occurred within the last three or four years. Names of authors, texts, firms and school officials are fictitious or are omitted, but the instances are all real.

"An' What 'e Thought 'e Might Require—"

Contracts between authors and publishers commonly, if not invariably, contain a clause whereby the author guarantees that he will protect the publisher against any claim for damages set up by a second author or a second publisher for violation of the copyright law. In other words, every author is responsible for avoiding in his manuscript the use without permission of copyrighted material. If he wants to quote from a copyrighted work, he must secure written permission to do so, and he or his publishers may be called upon to pay to the holder of the copyright a stipulated sum for this permission. Naturally reputable publishers are fully alive to the significance of a copyright; they understand that *copyrighted material represents property and the use of such material without permission is equivalent to theft.* Consequently, such publishers take special precautions to warn their authors against quoting without permission. Even so, authors are careless or forgetful; witness the following instance:

Passages Innocently "Lifted"

"We had a very curious case a number of years ago in which two or three selections were innocently 'lifted' from our Smith Series of Supplementary Readers. Several years after his readers appeared, Doctor Smith happened to be thumbing through a new set of readers by Jones and spied several selections repeated in identical form from his own readers. Doctor Smith reported the matter to us, and we at once took it up with the publisher of the Jones readers.

"This publisher was amazed at what we showed him and promptly summoned Mr. Jones to explain his outright infringement of copyright. Jones told his publishers: 'Yes, I put those selections in my readers myself; they are my own material; I have been using them for several years when telling stories to children, particularly to pupils in school auditoriums.' Naturally, this mystified Jones's publisher and the editor who had put the Jones readers through the press. So they challenged Mr. Jones to tell these stories then and there; they had our Smith readers in front of them and followed the stories while Jones told them *verbatim et literatim* as they appeared in our Smith readers. It then became perfectly obvious what had hap-

pened; Jones had used Doctor Smith's stories so long and so often that he had completely forgotten their source and had come to regard them as the product of his own lucubrations."

A similar case came to my attention recently in which a well known professor of history, after many years of successful teaching, was prevailed upon to develop his classroom lecture notes into a textbook. This material was in galley proof when a member of the editorial department felt that there was something familiar about the exposition of certain events, and search in the publisher's library showed that perhaps a tenth of the material followed word for word paragraphs in two or three other texts now less commonly used. Here it turned out that this professor had used notes from these other texts when he began to develop his course of lectures, that his typist at that time had omitted quotation marks and references, and that he had long since forgotten that the material he was using was borrowed.

Test Material Is a Special Sore Spot

Less excuse can be found for another form of copyright infringement by which several publishers who specialize in workbooks, test blanks and record forms have been many times victimized to their financial loss. I quote a case in point: "We publish a successful and widely used test of ability. There have been almost innumerable violations of our copyright upon this material, especially of the record book that accompanies the test, on the part of public and private clinics, hospitals, school systems and even college departments of psychology and education. Many of these violations have been unwitting, particularly those attributable to secondhand and thirdhand copying by one institution of forms they obtain from another institution, which, of course, have carried no statement of 'permission to quote.' It is only fair to say that most of the offenders have willingly discontinued publication when informed that they were violating copyright.

"More serious in many respects has been the quoting freely and without permission of portions of this test material in at least three widely circulated magazines. This quoting not only infringed upon our copyright but also endangered the validity of the test material itself for use in future testing."

Writers for popular periodicals appear to have a less sensitive conscience than writers of books. Perhaps they feel that the magazine article is more ephemeral or they may even argue that they are indirectly giving the original author valuable advertising for which he should be thankful. One of my correspondents writes: "The most flagrant case that I can recall of what seemed to be intentional plagiarism was the reproduction, almost in full, of a study we published for a well known psychologist. This material later appeared in a certain popular magazine on psychology, without any credit line and without any authorization from us. We called the editor of this magazine to account. He did his best to put the blame on the author of the article in his magazine, while the author blamed the editor who, he said, had agreed to 'clear up' any quoted material. Certainly neither of them did it, and the material appeared as if it were the creation of the magazine writer."

The Reproducing Nuisance

The illustrations that have just been given of plagiarism in textbooks and magazine articles are sufficiently numerous and serious to worry publishers and authors, but they are far less numerous, and in point of financial consequences far less serious, than the infringement of copyright that is going on, particularly in educational circles, through the use of the reproducing machine.

The naïveté with which this purloining of printed statements, and hence theft of property, is undertaken is well-nigh incredible: witness the following conversation reported by an experienced bookman, whom we may call Brown, who had just been talking with a superintendent, whom we may call White, and had, as he put it, "given him some information about copyrights that certainly jolted him."

"Hello, I didn't expect to find you still here, Mr. White."

"Why not, Mr. Brown? I'm not leaving Ironville; not even thinking of leaving."

"No, I didn't think you'd be leaving. To tell the truth, Mr. White, I thought you would be in the jail by the time I got here."

"Why, what do you mean, Mr. Brown? Why should I be in jail?"

"Because I heard that you had been caught stealing; they told me at our New York office that you had been stealing our property, and they gave me to understand that they were going to make an example of you for the benefit of other superintendents who might be playing with the same notion."

"Mr. Brown, I'd like to know what you are talking about; if this is a joke, it has gone far enough."

"That's exactly the point of view of our firm, Mr. White. Here's your last letter to our New York office. You say here: 'Please send me a complimentary copy of Book II of your "Thompson Workbook in Arithmetic." I have reproduced Book I which you sent me last term, and my teachers think it is fine.' "

Salesman Brown went on to say that he knew that he was taking a risk of never selling another textbook in Ironville, but also knew he would never sell a "Thompson Workbook" there; furthermore, he believed that White was an honest man and would see the light if he caught his attention sharply and then proceeded, as he did, to explain quietly the unfortunate, and in the last resort unethical, nature of the reproducing nuisance. Superintendent White listened to his explanation, pressed a button on his desk, summoned the janitor, pointed to a pile of reproduced material, told the janitor to throw it in the schoolhouse furnace, and then gave the gratified Brown an order for enough of Book I and of Book II of the "Workbook" to outfit his school system.

In that case a good bookman and a good superintendent achieved an amicable and a proper adjustment of a situation that is all too common.

I think it likely that some school officials may stifle their qualms of conscience by the notion that no one suffers except the publisher, that the publisher can stand the few pennies he may lose, and that they have done him enough favors by buying his other books. At any rate such an attitude would be a natural one for those who believe that the schoolbook publishers, as the governor of one of our southern states expressed it, form "a gigantic octopus stretching its slimy tentacles into every nook and cranny of our public school system!" Actually, violations of copyright entail more loss in dollars and cents to authors than they do to publishers. This statement will surprise many readers, but I am assured that in most publishing houses the amounts paid in authors' royalties, meager as they often are, exceed the amounts that the publishers are able to earn in dividends upon their invested capital.

Salesman Stifles His Objections

But in many other cases the book salesman is fully aware of this illegal use of copyrighted material, yet dares not discountenance it for fear of loss of business on other items that might easily amount to more than the loss on the material that is being reproduced. To quote from one of my correspondents:

"Usually our agents just say nothing. Sometimes they make a polite show of remonstrance to good effect; that occurs when the school official is not aware of any wrongdoing. Occasionally they remonstrate, only to have the perpetrator tell them that he proposes to do about as he pleases. In that event you might suppose that we would bring suit for legal recovery, but we have never done so and it would probably be inexpedient unless a goodly group of textbook publishers would join us in standing against this nuisance. It is doubtful if you could persuade a dozen, or even half-a-dozen, book firms to stand together on this issue.

"Something ought to be done to make school people clear about the ethics of the book business, and especially about the ethical and legal aspects of the copyright, but not much will be done unless the professional educational associations or the educational magazines or the institutions for the training of teachers take the matter into their own hands. Especially to be counteracted is the impression that there is no violation of copyright if only enough copies are made to supply the local needs and if none is sold for a profit. How greatly this information is needed is demonstrated by the fact that one of the school magazines recently offered a prize to a teacher for submitting a device for securing economy in school administration—a device that included reproducing!"

A Startling Example

The instances of school reproducing that have been cited refer primarily to classroom material largely confined to test material, word lists and the like. It has been shown that often there are factors in the situation that explain, though they do not justify, the infringement of copyright. The ordinary excuses can be less easily applied to the following particularly heinous copyright violation, cited by the editor of an outstanding firm.

"Four years ago the city of X reproduced the first five chapters, complete, of our book by Doctor Blank (naming a well known book for students of education) and distributed these sets to the teachers of the entire school system. This was done without permission and without notice to us. When five chapters had been so distributed, the matter came to the attention of our local manager in X, who, when he protested, was informed that the school authorities had not intended to reproduce the rest of the book! We have always, quite naturally, taken that statement with a large hunk of rock salt."

While we are talking about heinous violation of copyright, what does the reader think of the letter sent to university professors by a certain publishing company in April urging them to produce books by reproducing that will be sources of profit by simply (to quote the letter) "gathering together your own ideas or the best parts of several other books"? This open invitation to professors and teachers to "lift" the products of the brains of others is discussed editorially in the *Publishers' Weekly* of May 6.

We have just described the reproducing nuisance that arises from the unauthorized reproduction of copyrighted material. What should be the attitude

of school and college teachers and what should be the attitude of publishers toward such reproduction if made with the authorization of the copyright holder?

I suspect the reader may say, "That is all right, and the publishers ought to grant such requests freely." Perhaps some publishers do so, but I believe more of them do not, and I suspect that the reader has little appreciation of the extent of the drain upon the financial returns of the author and the publisher that would result if all such requests were granted. Here is how one publisher puts it: "With the professors and superintendents of schools it is an old, old story for them to want to reproduce selections from important publications 'for the use of their own students and not for distribution' or 'in order to test the material before adopting it.' Invariably the very meat of the subject is included in the pages selected by the professors; and since it is the student market, in many cases, for which the book was primarily published, we invariably say 'No.' "

This publisher appends to his letter a list of thirteen specific requests received within three or four months; they come from high schools, normal schools and colleges of national and even international reputation, and these are the amounts of material they wish to reproduce and distribute free to their students: 12 pages, 8 pages, a chapter, 25 pages, 21 pages, an indefinite amount, a chapter, 8 pages, 4 pages, 12 pages, 1,600 words, 4 pages, and, last but not least, 138 pages!

A Matter of Some Inconvenience!

In declining this last request from the college of commerce of a large state university, the publisher reminded the college official that the authors of the book from which he wished to reproduce and distribute 138 pages had put considerable time into the preparation of material, that this had been supplemented by a considerable investment of capital on the part of the publishers in order that the material might be available in book form to all persons interested, and that both author and publisher must rely upon direct sales to such persons to recoup their investments of time and money. To this polite explanation the university's representatives replied: "I have removed these selections. . . . You can appreciate that this is a matter of some inconvenience to me, and I am most surprised and disappointed at the arbitrary manner in which you deal with members of the teaching profession."(!)

Another university teacher, in charge of the extension work of a Western state institution, on being called to task for distributing, without even a "May I?" quantities of material copyrighted by this same publisher, was far more concerned over the source of the publisher's information than over his own offense; as for that, he explained, it is interesting to note, that he was "*merely following practices in the use of material that have been followed by extension divisions all over the country for many years.*" What an amazing sidelight on the ethics of some higher institutions of learning!

Unethical Answer Books and Illegal "Cram Bureaus"

Of the numerous other variants of illegal infringements upon the rights of authors and publishers, two only can be mentioned here.

The first refers to the preparation and sale of solutions or answers to the problems of a given textbook (commonly a college text in mathematics). An enterprising student in New York not only sold material of this sort locally, chapter by chapter, but also began to advertise his keys by mail and even attempted to establish selling agents in other institutions where the same textbook was in use. The publisher, by vigorous representations on the part of his attorneys and by conference with the college authorities, induced the student to give up his business and to destroy his stock and his stencils. Somewhat similar reports are made by publishers of workbooks sold without permission to accompany copyrighted texts.

The second variant is most neatly illustrated by the decree of Federal Judge Brewster, which is cited in a recent issue of the *Boston Globe*. Two persons who had been doing business, mostly with Harvard and Radcliffe students, as "The College Tutoring Bureau," were "perpetually enjoined and restrained from printing, reprinting, publishing, copying, distributing, selling or exposing for sale any of said copyrighted books or any other book or work pirated or copied therefrom or any parts of said copyrighted books or quotations therefrom or any other version or abridgement thereof." Judge Brewster also ordered destroyed all reproduced copies and stenciling equipment seized by a raid on the tutoring bureau by a United States marshal, and awarded damages totaling one thousand dollars to the four publishing firms concerned: The Macmillan Company, Houghton Mifflin Company, Ginn and Company, and Harper and Brothers.

It appears, therefore, that publishers and the authors they represent will have little difficulty in enforcing the copyright law, once they decide to take legal action. How much better that the school administrators and the college teachers of the country should understand the significance and see the "sweet reasonableness" of copyright protection; that is really all that is needed to rectify what is now a decidedly unsatisfactory situation.

Responsibility for Upholding Schools Rests With the Profession

The faith of the American people in education must be restored through creation of greater confidence in the institution itself as well as in its vital social values

By GEORGE F. ZOOK, United States Commissioner of Education

SO FAR as technical knowledge and skill are concerned, we are far better able now than ever before in the world's history to produce the necessities and even the luxuries of life. Constantly improved methods of transportation have made it possible to transport these products to the farthest parts of the earth and to receive from far lands their delicacies and natural resources.

The depression has been a long, sad commentary on our ability to organize the distribution of our agricultural and manufactured products so as to reach those who are perfectly willing and able to do their part in production or commerce. We are now engaged in a strenuous effort to reorganize the processes of production and transportation so that all men and women can have not only a fair share of the world's goods and comforts, but also the satisfaction of earning them in common with others.

It seems quite likely that as a result of measures now being fostered by the federal government we may be able to increase still further our power of production and especially our means of distribution. It will be a tremendous economic accomplishment to place all of our able citizens on a selfsupporting basis. We should be shortsighted, however, if we failed to realize the importance of the total social implications growing out of the present measures. Among the agencies of society that are bound to be affected are the schools.

Schools Must Readjust Themselves

We are now witnessing a series of tragic circumstances in connection with the proper financial support of schools. In their panic about economic conditions, Americans, who have been devoted to the schools as to no other social agency, have wavered in their realization of the significance of the schools. While almost every foreign country, under more severe circumstances, turns hopefully to education as one of the main ways out of chaos, in America we allow ourselves to discuss in the legislatures and through the public press the supposed relative merits of more roads, sewers, streets and water supply systems as against the enduring results to be gained from adequate school facilities.

I do not mean to imply that the schools should not readjust themselves, in common with other social agencies, to the necessities of present economic circumstances. In many instances the schools have been too slow in making such readjustments. I do mean to assert, however, that in our choosing we should discontinue temporarily, if necessary, those extensions of physical resources which we can easily dispense with in most instances and hold fast to those things that have enduring value. The value of our school system is beyond question.

Government Versus *Education*

Failure on the part of local and state government officials to understand the significance of the preservation of educational facilities may well be the cause of deep apprehension. America has two main social agencies—government and education. The first exists primarily for the purpose of protecting the individual and facilitating his economic progress. The second has for its function the development of the native powers of the individual so that he may be prepared to make the most of his economic surroundings and his mental and spiritual capacities. Both agencies are necessary to the success and happiness of the individual citizen but each has been largely developed independently of the other. The natural result of this unfortunate situation is that the two agencies do not understand each other.

Education does a poor job of contacting with government and when government deals with education it is likely to do so unintelligently. My plea is not for more government in education—certainly not more governmental control of education—but

rather for more education in government. We shall never be able to accomplish the necessary results in education until we can convince those who represent us in government of their fundamental significance and their proper organization and support.

For example, school administrators for years have been calling attention to the waste and ineffectiveness of the one-room rural school. Leaders in higher education point eloquently to the archaic organization of higher institutions in many states. School superintendents and college executives long ago demonstrated the economy of employing prepared teachers rather than well intentioned but relatively untrained young women who each year use teaching as a convenient but temporary avenue to their later careers. Yet those who represent us in the legislature and in administrative positions frequently have not the vision to establish a school system on an economic basis or the courage to foster a school rather than to build a road.

Adult Education Movement Is Significant

It is easy for those of us who represent education to criticize those who represent us in government for their lack of vision as to what things are of enduring importance. I am not disposed, however, to widen the breach that is already too great between those who serve in education and those who are served.

I wish rather to lay the blame for this situation frankly upon ourselves. We educators are supposed to know how to develop the minds of little children so as to make impressions upon them that will be permanent after they have become men and women. It is the business of the schools, then, to add purpose to knowledge—to imbue young people with ideals so deep and so powerful that they will not quail and hesitate before the first temptation that presents itself after graduation from school.

We should not think of our task as being completed with the education of boys and girls or even of young men and young women. They have long lives to live after they complete the period of formal school. Through the hard knocks of experience they may unlearn many of the fundamental truths which they have been taught. The educational system should perform its task so that it will have means and facilities of continuing the education of men and women throughout life.

The present adult education movement may ultimately turn out to be one of the most significant departures in education. While the movement will doubtless be much concerned with training and retraining in the several vocations which new processes of production and transportation will bring into being, its greatest significance may easily be in the opportunity for master school teachers to interpret social trends and to reemphasize the fundamental significance of education in our social development.

Through this process and others I believe that those of us who are engaged in education can keep the importance of education before the public and before those in government who represent the public. In the end, we must realize that we have a product to sell to the public. If we are to be successful, this product must be organized and displayed so as to make the people desire it more than they desire some ephemeral pleasure done up in a tinseled package. Our efforts must be intelligent; they must be high minded and convincing.

Americans may have faltered a little in their faith in education. If so, we must examine our own possible shortcomings as one of the main causes. When we adapt the content of education to the needs of modern life, when we so organize it as to challenge the efficiency of our friends in government, when we display that missionary zeal in the development of education that should characterize every good teacher, education will once more resume a preferred status in the minds and hearts of the American people.

School Laws Need Simplification, Survey Reveals

Legal and regulatory provisions affecting secondary education need codification and simplification, according to the findings of the National Survey of Secondary Education. As these laws now exist they represent a series of amendments, changes, and supplements in the form of piecemeal legislation over a period of many years. Legal tendencies are toward greater state control over secondary schools. While the legislature of each state has regarded secondary education as a state function, the major responsibility for the support of education rests upon local school districts. More practical legislation is needed for the creation of larger local districts or units to control and support secondary schools. The present legislative schemes for larger districts through the reorganization of two or more districts have not been adequate to the needs of secondary schools.

The study, in addition, reveals that state requirements for attendance at secondary schools are moderately low in a majority of the states. Recent legislation, it is explained, tends to favor increased means for attendance at high schools already established rather than the establishment of more high schools.

Guidance Is a Major Function of Modern Education, but—

The teacher who attempts to experiment with a guidance program without thorough understanding of the problem is apt to meet with failure

By DAN H. PERDUE, State Supervisor of High Schools, Charleston, W. Va.

NEVER before has the need for wise guidance of youth been so great. The multitudinous problems that confront young persons today are paralleled only by the complexities of modern civilization. Without wise counsel and sane leadership, youth will be bewildered in a maze of educational, vocational and social difficulties unknown to the past generation.

To learn the business of living, a person must be given a laboratory where he can gain the knowledge and experience he needs. No other experimental laboratory has been devised that offers such great possibilities as does the school. The potentiality of the school is limited by two factors only—the ability and willingness of the teacher to devote himself to the service of the boys and girls and the willingness of the public to provide the necessary funds for the public school system.

It is probable that the present financial crisis will temporarily preclude the necessary financial support of the public schools. Nothing could be more undesirable than the closing of schools at this critical time and nothing is likely to have more dire consequences. It is more necessary than ever before that schools aid pupils in the acquisition of the knowledge, ideals, attitudes, habits of conduct and ability of self-analysis necessary in American life.

Education of high school pupils for citizenship in a democracy involves more than the learning of assigned lessons and the passing of examinations. Education that merely attempts to make the pupil a scholar by requiring him to learn and remember facts is inadequate preparation for modern complex civilization. The citizen is good only to the extent that he does desirable things. Teachers must recognize the fact that exposure of pupils to subject matter is no guarantee that isolated facts will influence the pupils' behavior or create in them a desire to do better things. The goal of education is proficiency in the art of living. If an inexperienced pupil is to become proficient in the art of living through experiences gained from the public school, there must be a continuous and increasing effort made by teachers and administrators to create learning situations that will enable the pupil to experience for himself both the necessity and the desirability of correct behavior.

The pupil must be helped to discover his abilities and limitations, his likes and dislikes, in the fields of desirable human knowledge and activities.

Guidance Helps Pupils Adjust Themselves

The possibilities of knowledge lie in its application through pupil activities consciously directed toward the acquisition of certain desirable abilities. Until the school succeeds in arousing the pupil's interest in himself to such extent that he will consciously use the knowledge he possesses to adjust himself to his educational, social, civic, moral, leisure, vocational, leadership and followership opportunities, we may expect maladjusted citizens.

To aid high school pupils to acquire both the disposition and the ability to discover their possibilities and limitations with respect to a harmonious adjustment of themselves to the art of living, a guidance program has been prepared for the secondary schools of West Virginia. The work was done through a committee appointed by the West Virginia Secondary School Principals' Association.

Major Objectives of Program

The guidance program is built around the following major objectives: educational guidance—to assist the individual to enter and to pursue successfully his education, both institutional and noninstitutional; vocational guidance—to assist the individual to elect an occupation and pursue it successfully; leisure guidance—to assist the individual to choose and, if necessary, to prepare for, enter upon and make progress in desirable leisure time activities; social, civic and moral guidance—to help the individual to develop ideals, attitudes, appreciations, skills and habits contributing to his social effectiveness; leadership guidance—to assist the individual to choose leaders and to become a leader; followership guidance—to assist the individual to establish habits of cooperation in activities involving leadership other than his own.

Six Specific Objectives

Each major objective is broken into a number of specific objectives. Following each specific objective are suggested pupil activities and a bibliography. A brief summary of the objectives of educational guidance follows:

The general objective is to assist the individual to enter and to pursue successfully his education, both institutional and noninstitutional. The specific objectives are:

1. The disposition and ability of the pupil to analyze his needs and evaluate his possibilities for satisfying them. Pupil activities. Bibliography.
2. The disposition and ability of the pupil to find out which type of school is best adapted to serve his needs, to know in advance the specific offerings and their purpose in the school he may attend and to discover the admission requirements. Pupil activities. Bibliography.
3. The disposition and ability of the pupil to choose from point of requirements and possible future benefits the institution he plans to enter as his own interests, aptitudes and abilities best prepare him. Pupil activities. Bibliography.
4. The disposition and ability of the pupil to try out courses for exploration of his own interests in the major fields of knowledge. Pupil activities. Bibliography.
5. The disposition and ability of the pupil to adjust himself to the curriculum, teachers, methods, organization and student life in the school in which he is enrolled or is to be enrolled. Pupil activities. Bibliography.
6. The disposition and ability of the pupil to develop so far as he can the habit of using the noninstitutional educative agencies in his environment. Pupil activities. Bibliography.

Pupil activities are suggestive and are intended to direct the knowledge the pupil has and the facts he learns toward the acquisition of human abilities. The bibliography contains reading material for the purpose of stimulating the pupil's will to work and to show him how to perform the activities that will give him the desired ability.

The home room period is established for purposes of socialization, curriculum adjustments, exploration, training in leadership and followership, budgeting school time, government and solution of many personal problems of pupils' home, teacher, school and outside connections. In the program

Rolling library for distributing books to junior and senior high schools in rural areas. A project in educational guidance.

of guidance in West Virginia the home room period is so arranged as to take care of the major part of the pupils' guidance. The home room teacher is the agent through whom information concerning the pupil is collected from teachers, parents, associates, sponsors and others. The home room teacher is assigned the responsibility of sponsoring informational guidance.

Success Depends on Teachers

In cooperation with the administrative officers of the school, the home room teacher is expected to devise a program that will provide not only for immediate activities of the pupils but also for their future development in harmony with ideals that individual and social efficiency find desirable. Guidance is more than regulating, steering, directing the way. It should make available a large body of information and experiences. It should provide diagnostic and prognostic testing, self-analysis and ability to weigh all significant alternatives so that in the end the individual can make his own choice.

It is highly probable that the guidance program will not be translated immediately into learning situations. Its successful operation in the life of the school will be ensured to the extent that teachers and principals determine to put it into operation. The determination must be strong enough to guarantee a period of serious study of the whole problem of pupil guidance. Any effort on the part of a teacher to experiment with a guidance program before he has thoroughly familiarized himself with the problem is likely to result in failure of the program.

The period of study will no doubt bring disappointment to some teachers. But the disappointment should not discourage them. It is always more or less unpleasant to be disturbed in one's habitual way of doing things. But only by being dissatisfied with the present scheme of things can we hope for improvement. If by changing our concepts of the purpose of secondary education we can train better citizens, there should be no hesitancy in making the change. It may be painful but it will pay rich dividends.

Should Banks Supply Security for School Deposits?

"No," says the author, who is of the opinion that such a requirement stifles the bank's business opportunities and is completely unfair to the private depositor

By WILBERT C. WEHN, Secretary, Board of School Directors, Johnstown, Pa.

IN THE past we have never questioned the practice of requiring security to protect public funds on deposit in depositories. We have commended our legislatures for making it incumbent upon public officials to require such security. We have recognized it as good business practice to protect public funds from loss through bank failure.

The thoughts back of requiring such protection were generally accepted by taxing districts, banks, bonding companies and the courts, but it has taken the economic depression with its unfortunate bank failure record, to point out certain fallacies of this system. It was perhaps well enough to accept that order of things when economic conditions, banking problems and conditions affecting society in general were different, but the history of the past two years has changed the old order of things, and an awakened public asks whether public funds in depositories should be protected, and whether banks should give discriminatory protection to any funds.

Legislative Changes May Be Needed

The question is largely a legislative one. The practice of requiring security for public deposits goes back a hundred years. Public opinion up to the present time favored such protection. Public policy demanded it, and consequently the trend of legislative enactment has been in that direction. H. H. Linn says in his book, "Safeguarding School Funds": "The weight of authority substantiates this conclusion (that requiring security for the deposits of public funds is a justifiable procedure) and those who have been opposed to this practice have been unable to stop the trend in its favor." In twenty-six states there are statutes that require depositories to furnish security for school deposits. In thirty-nine states the statutes require protection for state funds. Practically all cities require such protection. In districts where the statutes do not require protection, the local officials usually require such security. If the question is raised of the propriety of such requirements in the light of present day conditions, question arises as to the merit of legislation that requires such protection. In the past, public officials in districts where protection has not been required have been guided by the legislative trend in the matter and it is likely that they will continue to be so guided. Therefore it seems that public attention should be focused on the problem so that the trend of legislation may be changed, if advisable.

Courts Should Weigh the Problem

The question of whether the attitude of the courts in the past should be supported in the light of present day conditions is also raised. While courts are governed largely by precedent and are slow to change from established principles, still when conditions change and society is adversely affected by the continuation of old doctrines, relief is usually granted by the courts. There seems to be sufficient weight in these newer philosophies to engage the serious attention of any court that may be called upon today to pass on the question.

In some political divisions, chiefly in the states, public deposits have been given preferred rights when insolvent banks were liquidated. This right of preference was based on two theories derived either from statute or judicial decision. These theories are explained in "American Law Reports," as follows:

The first, the common law prerogative, is a remnant of the monarchial form of government, under which the Crown arrogated to itself the right of first payment of its claims out of estates of insolvent debtors. The existence of this right in republican government as established in this country has been denied by the courts of several states, while others maintain that it is an attribute of sovereignty and not inconsistent with the prin-

ciples of free government, and, therefore, a part of the common law as adopted by the people.

The second theory, that of trust, is based upon the premise that public money is the property of the state, and its deposit by a public officer in a bank which thereafter becomes insolvent does not divest the title of the state, and the appropriation of such money to uses for which it was not intended cannot be allowed to prejudice the interests of the people. There are numerous authorities who take this view in cases where the deposit of the funds was unauthorized or unlawful, but where the deposit in the manner made was not expressly prohibited, the courts are inclined to take a contrary view.

This right of preference, however, usually has not been extended to local districts and does not apply to national banks, because the National Banking Act makes no distinction between different classes of deposits (First National Bank *vs.* Colby, 21 Wall, U. S., 609). While public policy still may demand protection of funds, the right of preference has grown less effective, the trend has been away from it.

Another angle to the problem that has served to require depositories to protect deposits is the responsibility placed on public treasurers in many states. Many states hold public treasurers responsible for the safe keeping of all funds in their possession, including any losses resulting from bank failure. As a result, in writing bonds for treasurers, bonding companies have required depositories to post security in order to minimize their own possible loss. There is a question as to the propriety of requiring banks to supply security in order to relieve public treasurers of responsibility for such funds. This lessening of the responsibility of public treasurers may have many dangers. It may be entirely wholesome to hold the treasurers responsible, but on the other hand, if the properly constituted legislative authorities would designate the depositories, many of the dangers would be removed.

Private Depositors Suffer

The right of preference discussed above has, to all practical appearances, been set up by banks in an entirely different manner. In the last two years the right of preference has been made applicable to all types of taxing districts and has become virtually the only method of protecting public funds. And it is this recent trend that injects the newer philosophies into the whole problem. The method is the one whereby a bank assigns certain of its collateral or securities, or assigns some of its first mortgages which it holds as its own security for loans made. Should a bank that has pledged such collateral or mortgages fail, the taxing district could, if its agreement with the bank were in proper shape, proceed at once to realize on such assets and recover the amount lost.

The bank, therefore, to all practical intents and purposes, would have given preference to the payment of public funds, and such preference is naturally detrimental to the payments of private depositors. In other words, the defunct bank would pay its public depositors in full and its private depositors would share in what was left. For example, let us assume that a bank with $1,000,000 in deposits, $500,000 in public accounts and $500,000 in private accounts, fails. Let us also assume that upon final liquidation this bank is able to pay 70 per cent of its deposits, or $700,000. The public depositors would receive their $500,000, or 100 per cent settlement of their claims, while the private depositors would receive only the $200,000 remaining, or 40 per cent of their claims. This is the situation that existed in some banks that have failed recently. A situation of this kind is inevitable in liquidating a bank that has pledged part of its assets to secure public funds.

An Unfair Arrangement

The general public is beginning to realize how unfair this system really is. The private depositor feels that he is entitled to a full share with all other depositors, both public and private, of all the assets of the bank. Where part of the assets have been pledged, the private depositor cannot receive his rightful share of the assets. Bankers also recognize the unfairness of the preference system. It is apparent that public bodies, through their taxing power, are able to recover such losses by shifting the burden to the entire community, and that private depositors have no such recourse. This is hostile to public welfare, because losses of public funds due to bank failure are made up out of taxes, and funds originally provided for other purposes are diverted to make up bank losses.

The mere pledging of the assets of a bank is inimical to public welfare. Such pledges result in the freezing of certain of the bank's assets, which is one of the chief causes of bank failures.

Every dollar of security pledged by a bank freezes just that much of its liquid assets, makes it necessary for the bank to call in more loans, hampers the bank in extending legitimate credit and increases the evil caused by the vicious spiral of deflation.

It is in this sense that the mere pledging of a bank's assets is inimical to public welfare. It is admitted that the argument has less weight as it applies to large, strong banks that have no need for such collateral. It is the small, weak bank that

is often seriously affected by the pledging of assets that it might otherwise use effectively.

Before the days of the Reconstruction Finance Corporation and the Glass-Steagall Act, banks found a way out by pledging mortgages, because mortgages could not be liquidated easily. This seemed to solve the problem in an acceptable way, although many public officials considered mortgages undesirable and unstable security. But with the advent of the Reconstruction Finance Corporation, the Glass-Steagall Act and other methods designed to loosen up credit, the assignment of mortgages was discovered to have the same defect as the assignment of collateral, because mortgages could then be used for loans by the banks from the Reconstruction Finance Corporation and part of their assets thereby turned into cash.

Freezing the Bank's Assets

The assignment by a bank of collateral and mortgages not only freezes the bank's liquid assets and causes the withdrawal of money from circulation, but has the further effect of stifling a credit supply many times the value of the collateral. This can be easily understood when it is realized that in normal times the supply of money available is 90 per cent bank credit. For example, if a bank has $0.10 in cash it can make this worth $1 by adding $0.90 available credit. This should make school administrators and other public officials realize how they affect a bank's liquid position by demanding security for public funds.

Back in the days when banks chiefly supplied corporate surety bonds or personal bonds, the arguments cited here would not apply. If a bank could supply a bond, pay the premium on it and still make an acceptable profit for its stockholders, (although in the last analysis the taxing district usually paid the premium through lower interest earnings than the bank might otherwise pay) the taxing district and the general public were both better off because of such protection. But corporate depository bonds for banks practically do not exist these days, individuals are more and more loath to obligate themselves on personal bonds and taxing districts are loath to accept them.

If corporate surety bonds still were available, and if the surety companies were financially sound (and some have been found not to be) this paper would have no point. But this inability to use corporate surety bonds and the solution of the problem arising thereby of protecting public funds through pledging bank assets, with its consequent detrimental effect on private depositors and its general effect on the available credit supply, is what brings the propriety of present day requirements for security for public funds to the front.

Sources of Leadership

By HARRY S. GANDERS
Dean, Teachers College, Syracuse University

There are valid reasons for looking upon practical arts education as a fertile field for the development of broad and virile leadership for the entire area of education.

In the first place, academic education will probably not furnish leadership for a major reorganization, chiefly because it is committed to a policy of dissection, which gradually and effectively kills real education. Academic educators are unable as yet to see that only when there is unity, coherence and free interplay of elements, can there be a living education. The disassociated, compartmentalized subjects of academic schools are of course dead. It is all too obvious to even academic teachers themselves, that the old scheme is mainly good for "perpetuation of the tradition" and hence inappropriate as an origin for a living education. There is probably sufficient dead wood in the academic tree to warrant the ever present, strenuous resistance to any "shaking up" which might make the whole thing crumble.

Academicians will accept reorganization only after such time as a new education is conceived, established and operated for years, in their very schoolhouses, with overwhelming and incontrovertible proof that the new education is really superior. Hence Americans might seek leadership for a reconstructed and revitalized education from among men and women in the practical arts fields. The latter can meet the challenge if they become students of the whole of education and if they can but envision the possibilities in their full comprehensiveness.

In the second place, vocationalized schools are democracy's children. America being essentially democratic in its political and social organization, these schools that concern themselves with the well-being of the 90 per cent, are sure to gain tremendously in popular support.

Education Centers Around Pupil

A further justification for seeking educational leadership from among this group is that with the exception of an attempted divorcement of vocational and cultural education, which they are urged to correct, their basic educational assumptions are sound. Schools and departments of practical arts do not have children carry on meaningless, formal exercises in disassociated and unrelated, artificial subjects. The pupil's experiences, his problems and his projects are, as they should be, the center of this education. A sound theory constitutes an acceptable foundation for virile leadership.

Impaired Hearing May Be Your Pupil's Difficulty

Atlanta school children are tested regularly for impaired hearing. Children who fail to pass the tests are either treated by ear specialists, or, if the impairment will not yield to treatment, they are given lessons in lip reading

By LILLIAN R. JONES, Lip Reading Teacher, and HAROLD H. BIXLER, Director of Testing and Guidance, Atlanta Public Schools, Atlanta, Ga.

SUE is spoken to at least twice before she makes any response. Her mother complains of her inattention and moodiness at home. Her teacher knows that although she has not fallen behind her grade she is learning much less about her school work than her abilities warrant. She has never had any special trouble with her ears. "Indifferent," says her mother. "Listless," says her teacher.

Walter, on the other hand, is definitely retarded. He is large for his age, and over age for his class. Though he is a tall fourteen-year-old, he sits with the ten-year-olds in the high fifth grade. He pays strict attention, presenting an interested and understanding countenance to the inquiring world, but when pressed for direct answers, his remarks are apt to be rambling and distraught.

What can be done about such children? The first step, certainly, is to make an accurate diagnosis of their cases. More and more we are beginning to ask, "Is their eyesight normal?" and "How well do they hear?"

Statistics differ as to the exact number of children with impaired hearing in public schools throughout the country, but that they are there in hitherto unsuspected numbers no informed authority can doubt. A United States Government bulletin on "The Hard of Hearing Child" estimates this number to be more than three million. The most deafened cases are obvious to the thoughtful observer, but many children are suffering serious inconvenience with dulled ears without being aware of any loss of hearing. Still greater numbers have impairments too slight to be detected except by the most careful measurement. To locate these children, to make every effort to remove the defect, to compensate for irreparable losses by special training, should be part of the health program of every modern school. Such a health program has been in operation in the public school system of Atlanta, Ga., for the past two years.

The importance of discovering these children early and seeing that they receive proper medical attention can hardly be overstressed. Sometimes the removal of wax or a foreign body in the ear canal is all that is necessary to restore the hearing. Parents who have consistently refused to have tonsil operations performed cooperate when they learn that the hearing is affected. Discharging ears, although they do not always respond to treatment, should be kept clean. The consensus of opinion among ear specialists today is that proper attention to the beginnings of ear trouble in children of today will lessen to a large degree deafness in the adult population of tomorrow. As for the child who does not hear well and has little hope of hearing better, the earlier he can be enrolled in a lip reading class where he will learn to use his eyes to supplement his imperfect ears, the greater will be his hope of a normal, well adjusted life.

Reading Lips Is Easy for Children

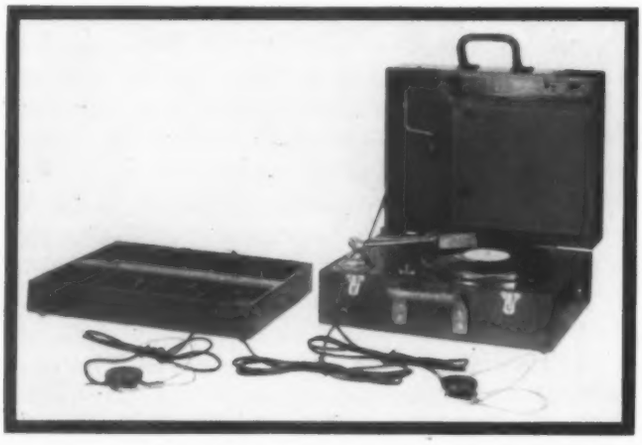
Lip reading, as the name implies, is the art of reading speech through interpreting the visible movement of the lips. To watch the mouth of a speaker is to see many clearly defined movements of the speech organs. Though the observed changes may be taking place at an estimated rate of thirteen times per second for average speech, the trained eye and mind readily interpret this motion into language.

The younger children learn to read the lips much as they learn to read print. They come happily to class, regarding it usually as a play period. Simple commands, such as "Run," "Jump," "Look out of the window," "Put the book on the table," "Throw a ball to Mary," are taught first. Then the better known, well loved Mother Goose rhymes are introduced, care being taken that each child understands and knows each word. Questions

are asked about the rhymes, using the same phrases over and over. Still later, short stories are told about attractive pictures. Simple news items, happenings about the school, conversation about everyday affairs are added bit by bit, until the child who does not hear well has learned to understand speech without hearing it.

The training of the older child is easier but at the same time more technical. He is capable of learning the movements of the various sounds. He learns to define these movements, to recognize them in words and syllables, to have whole lessons stressing one sound. He, too, has pictures and stories and games. His stories are longer; his news items are of broader interest; his conversational practice must cover a wider range. Above all, his interest must not be allowed to lag. Lip reading demands the utmost in cooperation on the part of the pupil.

The length of time necessary to learn to read the lips varies with the individual. Lip reading is classed by its exponents as an art, and like all arts, it improves with practice. The pupil with an analytical mind, who has to see each word before hazarding a response, makes slow progress, while the pupil with an intuitive mind makes rapid progress. Some pupils can master lip reading after a year of study so that they can go



Portable machine used for testing hearing in the Atlanta schools.

ahead successfully in their regular grades; others, whose loss is greater, may need instruction for a much longer period.

While interested and efficient doctors have for years carefully tested the ears of children during annual checks in the health programs of various city school systems, it remained for the Bell Laboratories to make practicable, accurate measurement of the hearing sensitivity of large groups. True to the traditions of their founder, Alexander Graham Bell, who was always interested in problems of hearing, the laboratories have within recent years developed and perfected a portable machine for testing hearing. This machine, which tests as many as forty-eight children at one time, is similar to a portable phonograph except that the sound is heard through a receiver or head phone rather than through a horn. The equipment includes the box resembling a phonograph, two specially made phonograph records and several receiver holders. The receiver holder will supply each of eight persons with a receiver or head phone similar to that used in the early radio sets. A receiver holder is connected with the machine by means of a cord and a plug which fits into an output jack on the machine. The other receiver holders are connected in series in similar manner.

How Tests Are Carried Out

Pupils may be tested in any ordinary classroom equipped with tables or fixed desks. Pupils of grades four and above may be tested in groups of forty-eight. Younger pupils should be tested in smaller groups. The right ear is tested first.

After placing the receiver to the ear and starting the machine, four series of numbers are heard, two series dictated in a man's voice, and two others in a woman's voice. Each series begins at a maximum volume and gradually diminishes to practically inaudible sounds. These four series of dictated numbers complete the test for one ear. The record is then reversed and the other ear is tested in the same manner. The hearing acuity for each ear is indicated by the last number which is heard and written correctly in any column for that ear.

A generous Atlanta citizen became concerned about those who do not hear well and in 1929 purchased a machine for testing hearing. He also financed the testing of children in six selected schools during that year. Results obtained were so challenging that the testing program was enlarged in 1931 to include all children enrolled in the Atlanta public schools above the third grade. The 1931-32 program of testing began with the third grade and included all children in that grade and all children in grades above who had not previously been tested, those found to have impaired hearing during the 1930-31 check, and those who within the year had been out of school with any disease likely to affect the ears—scarlet fever, diphtheria and influenza.

The examiner who did the testing was an experienced teacher, selected from the teaching force and trained in two days. She carried the machine from school to school, usually testing one school each day. Record sheets were distributed to the pupils in their classrooms. A quiet room was selected for the testing and the children were brought in, a class at a time. With careful planning and

A hearing test in progress in one of the Atlanta schools. As many as forty-eight pupils may be tested at one time.

the cooperation of principal and teachers, the time consumed in testing a single group averaged thirty minutes. Papers were collected and corrected during the day by the class teacher, examiner or other helpers. It was then possible to assemble all children whose papers indicated a hearing loss above a certain set standard and retest them in one last group at the close of the testing period.

Those whose papers still indicated a hearing loss were given further individual tests by the lip reading teacher at a later date. Where the hearing was found to be really impaired, even in the slightest degree, every effort was made to see that an ear specialist was consulted. The school principal and the school nurse were given the names of children in their schools who suffered any hearing loss. Responsibility for the follow-up work was placed upon the nurse. Children who were deafened enough to need lip reading were then enrolled in the lip reading classes.

In the group tested during the 1931-32 program, fifteen children were found to have definite hearing impairment and had never at any time been examined by an ear specialist. Of these fifteen, two who had total losses in one ear were unaware of any loss whatever. A third child in this same group, equally obvious to any loss, is deafened enough to make lip reading advisable.

While these lip reading classes are made as interesting and attractive as possible and are in no sense used as a threat, the fact that a child has been found sufficiently deafened to make this special type of instruction advisable has persuaded the parents of at least twenty children to have necessary remedial work done. Nineteen of these children improved greatly within a few months' time. In only one case did the remedial work come too late. This number does not include the numbers of others with lesser impairments who were persuaded to consult their own ear specialists, some of them for the first time.

While only fifteen cases of impaired hearing were definitely attributed to bad tonsils, many of the hearing losses attributed to discharging ears—by far the greatest single contributing cause to loss of hearing—could be traced directly or indirectly to diseased tonsils. Mastoid operations, common earaches, abscessed ears, influenza, meningitis, measles, and mumps all contributed their toll. Automobile accidents were said to be responsible for the deafness of four children, while one girl confessed to having punctured her own drum with a hairpin. Of the 198 children recorded in the school files whose hearing was definitely defective, only eight were said to have been born with dulled ears.

Emphasis upon hearing tests in the elementary

and upper grades stimulates the primary teacher to be on the alert for cases of impaired hearing among her charges. Since any teacher feels free to ask for a test of any child who has trouble in understanding the spoken word, there are proportionately as many children in the primary lip reading classes as there are in the upper grades.

At present forty-three children are studying lip reading in the Atlanta public schools. The lip reading teacher comes to the child in the elementary school for two half-hour lessons each week. The junior high school pupil has only one lesson a week but his class lasts a bit longer. In either case, the pupil leaves his own grade work for only the short period, and the time he misses from the lesson period is amply compensated for by his increased ability to understand when in class.

Thus we have a carefully planned program of testing, checking and remedial work. Sue's delighted mother and teacher now rejoice in a wide-awake, responsive child since the ear specialist has made an examination and applied simple remedial measures to Sue's ears. Walter's ears may be past the aid of an ear specialist, but he profits greatly by lip reading and as he develops the needed skill his newly-stimulated mind as well as his countenance is becoming interested. Moreover, Allene, who has not entered into the discussion so far, because her work has always been a little better than satisfactory, has discovered that she has a serious hearing impairment, and with the study of lip reading has developed from a good average pupil to be the leader of her class.

How to Correct Speech Faults

To meet a constant problem in correcting speech faults in public speaking classes, Charles C. Mather, Culver Military Academy, Culver, Ind., has devised an apparatus that may well be called a "visible corrector." It consists first of the board itself, which is electrically wired in such a way as to place a signal light beside each mistake to which the pupil's attention is to be drawn, and second, of a control board containing switches for each light. The control board is placed in the room and is operated by another pupil. As the mistake occurs in the speech of the pupil on the platform, the operator of the control board flashes the light opposite that mistake indicated on the corrector. The pupil making the mistake immediately corrects his error and proceeds.

The device is an answer to the problem facing the instructor of correcting common speech faults, such as the mispronunciations, "jist," "git," "fur," and "sich"; and the habit of repeating "anda" or

"uh" whenever the next word does not come readily. To call the pupil's attention to his mistake orally interrupts his flow of thought; to list his mistakes and call his attention to them after he has finished his speech is merely to cause him to agree that he has made the mistakes and then proceed to make them again in his next talk.

The corrector serves the purpose of silently drawing the pupil's attention to his mistakes as he makes them and gives him the opportunity to cor-

At the right is the corrector board, the panels of which are changeable. The top picture shows the corrector in use in a speech class. Note the pupil control of the board.

rect them before he proceeds. For the first two or three times the flash of the light will disturb the pupil, but it is not long before the mere premonitory click of the switch will suffice to cause him to make the correction, especially if the correction applies to a speech fault that he makes habitually and to which his attention has been called on previous occasions. If the corrector is placed at the proper height the pupil is inclined to keep his eyes at about the level for the most effective results.

Flashes of 1933 School Legislation

New laws enacted by the several states affect school personnel, fees and scholarships, school property, taxation and finance, and state and county organization

By M. M. CHAMBERS, Ohio State University, Columbus

MUCH of the legislation of 1933 has not yet been reported to any central agency, but enough is available for a preliminary glimpse. The following information has been secured from various sources, largely from Circulars No. 85 and No. 87 of the United States Office of Education.

Indiana provided that the minimum salary for teachers shall not be less than $800 a school year in elementary schools and not less than $1,000 a year in high schools. Missouri enacted a law permitting school boards to transfer a portion of the free textbook fund to the teachers' fund, and prohibited the appointment before the annual meeting, of any teacher, except superintendents in first class high school districts. Nevada authorized the renewal of teachers' certificates without attendance at summer schools when all other conditions have been met.

Maryland Reforms Scholarship System

Maryland defeated a bill designed to excuse from summer school attendance teachers who have been in attendance at summer schools within the past four years. Maryland also defeated a bill which would have required all teachers to take an oath of allegiance to the United States. Kansas enacted such a law. Kansas defeated a bill providing for a maximum salary schedule for superintendents, principals and teachers.

New Mexico established a statewide retirement system for teachers in the public schools and all state educational institutions. Maryland defeated a bill to abolish the state teachers' retirement system. Bills modeled after the New York law of 1932, prohibiting religious inquisition concerning applicants for employment as teachers in public schools, were introduced in Connecticut, Idaho, Illinois, New Hampshire and Wisconsin.

Maryland reformed its system of scholarships awarded by state senators in private colleges by providing that appointments shall be made only after competitive examination given by the institution and scholarships shall not be awarded to any applicant whose parents are able to pay tuition. Maryland also provided that a portion of the federal funds available for the support of the University of Maryland under the Morrill Act shall be expended, upon recommendation of the regents of the university, for the benefit of the Princess Anne Academy, a Negro institution. The board of regents is authorized to use public funds to establish partial scholarships at institutions outside the state for worthy Negro applicants who wish to take courses not offered at the Princess Anne Academy but available for white students at the University of Maryland.

Minnesota fixed a minimum tuition fee for state teachers' colleges and Maryland authorized the state board of education to charge tuition fees at the state normal schools. Pennsylvania was also authorized to charge tuition in its teachers' colleges. Washington authorized the state normal schools to grant the degree of bachelor of arts in education to students completing the four-year course of study.

Maryland authorized county superintendents to enlarge the usefulness of public school property by permitting the use of schoolhouses for meetings of the Grange and regularly incorporated societies of war veterans. Kansas required boards of education to furnish textbooks free to pupils unable to purchase them and directed the school book commission to reduce the prices of books.

New Taxes Yield Income for Schools

Minnesota, Idaho and Washington enacted taxes on chain stores. The Minnesota Act appropriates all the proceeds of this tax to the public schools, in accordance with the existing state aid law. In Washington 90 per cent of the revenue from this tax goes to the state current school fund and 10 per cent to the state general fund. The proceeds of the Idaho tax go to the school equalization fund. Washington also enacted a business and occupational excise tax, estimated to produce $8,000,000, all proceeds to go to the school fund.

Minnesota enacted an income tax and created

an income tax school fund to be distributed by the state board of education to districts on the basis of compulsory-school-age population. Kansas and Maryland defeated state income tax measures. New Mexico imposed an excise tax of 4 cents per gallon upon the use of lubricating oils, the revenue to be used to furnish free textbooks for children.

States Appropriate Funds to Aid Schools

Idaho enacted a school equalization law providing a minimum income from all sources of $120 a month per classroom unit in elementary schools and $160 a month in high schools. New Mexico established a state public school equalization fund to be distributed among the counties on a basis of average daily attendance. North Carolina obligated the state to pay at least one-half the cost of the extension of the school term beyond the constitutional minimum of six months. The state already pays the entire cost of six months' operation under an act of 1931, and extension of the term is optional for counties and school districts.

Indiana levied a state tax on intangible property, 10 per cent to go to the state general fund, one-fourth of the remaining 90 per cent to the county general fund and three-fourths to the school corporations of the county. The state obligates itself to pay each school corporation $600 per teacher per annum on the basis of one teacher to thirty-five pupils in grades one to eight and one teacher to twenty-five pupils in grades nine to twelve.

Minnesota appropriated $5,750,000 and $5,760,000 for special state aid to public schools in 1933 and 1934, respectively. Missouri appropriated one-third of the general revenue of the state, amounting to about $3,000,000 for the next school year, for the support of the public schools. Washington provided for increased contributions by the state toward the equalization of public school support by authorizing the levy and distribution of funds on a basis of 25 cents a day of actual attendance in the elementary schools. It also authorized the state to reimburse school districts for up to one-half the cost of the transportation of pupils. The legislature appropriated $20,000,000 for the ensuing biennium for the use of the common schools.

Nevada prohibited school districts from issuing bonds to run for a period longer than twenty years; authorized counties to issue negotiable bonds during the ensuing biennium to cover deficiencies in salaries and other expenses of maintaining the county government, including the schools, and required that bond issues by local subdivisions must be authorized by a majority vote of the resident owners or spouses of the owners of real property therein.

Kansas reconstituted its state board of education to consist of ten members, including the state superintendent, one member of the faculty of the University of Kansas, one from Kansas State College, one from the state teachers' colleges, one from a private or denominational school, one county superintendent, one city superintendent, one high school principal and two members from private business. It also created a textbook commission of seven members, consisting of the state superintendent, the state printer and five persons appointed by the governor, including one county superintendent, one city superintendent and three persons not engaged in school work.

Idaho abolished the office of commissioner of education and transferred the duties to the state superintendent of public instruction, whose salary was increased from $2,400 to $3,600. New Mexico abolished county boards of education and consolidated all rural districts in each county, exclusive of municipal and independent rural school districts, into one district under the jurisdiction of a new board of education of five members elected for six-year terms and having substantially the same powers as boards in municipal districts. Arkansas abolished county boards of education and county superintendencies, transferring their duties to the county court and the county examiner, respectively. The county examiner is appointed by the county judge and must be an active teacher. His salary may not exceed $650 per year.

Organization Changes Are Made

West Virginia enacted a county unit law consolidating all magisterial districts, subdistricts and independent districts under a county board of education consisting of five elected members serving four-year terms. The county board is a corporation and has title to all school property under its jurisdiction.

Kansas defeated a bill which would have created a county school board to supplant all local boards of education. Oregon amended its optional county unit law for the purpose of encouraging more counties to come under it. In its new form, this law resembles the Utah county unit law. Idaho provided three plans under which districts may consolidate and also authorized two or more districts to combine their schools for educational purposes without district consolidation.

Maine provided for a state commission of fifteen citizens appointed by the governor to study public school finance. Oregon created an educational commission composed of seven citizens appointed by the governor to study the public elementary and high school systems with special reference to organization and finance.

Basic Principles Must Be Established for Pupil Transportation

Although every state in the Union now provides pupil transportation, certain well founded objections still persist and these indicate the necessity for regulation of this activity by state law

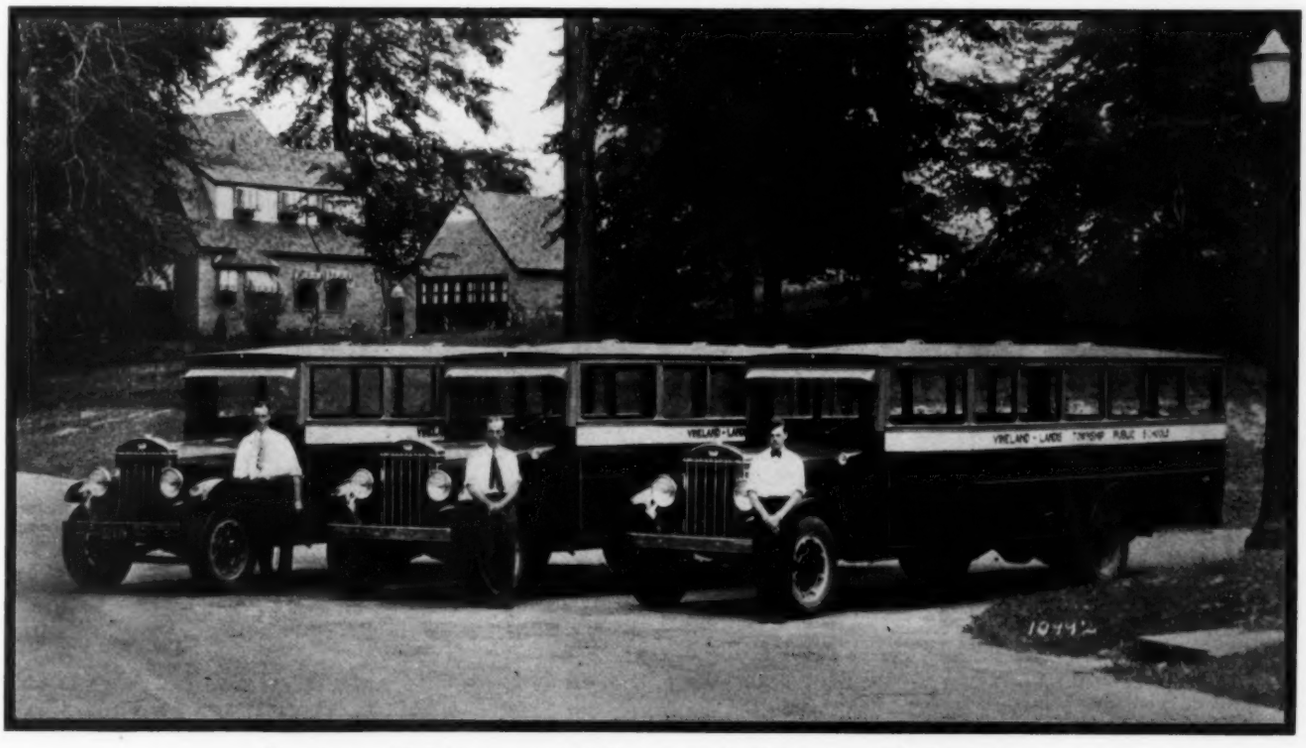
By BURTON K. FARNSWORTH, Director, Secondary Education,
Utah State Department of Education

THE prevailing interpretation of education in most states a short generation ago was "a school house within easy walking distance of every child." Even while this doctrine was at flow tide, a countercurrent had set in, under the leadership of such men as Horace Mann and Henry Barnard, which indicated the limitations of small school districts and called attention to the shocking conditions prevailing in many small schools.

Difficulties besetting the common school district within a growing city gradually led to the consolidation under a single head of all schools within the city. The improved educational facilities resulting were in striking contrast to those found in the common school districts. The reform spread from city to city and thence, more gradually, to the rural areas. Consolidation in the rural areas, however, was bitterly opposed, chiefly because of the inconvenience of getting children to school. Out of this conflict was born pupil transportation.

Pupil transportation is a natural corollary of consolidation. The first without the second is unnecessary; the second without the first is impossible. Even if it were possible, it would be manifestly unfair.

School transportation, like many other educational reforms, was first adopted in Massachusetts. Beginning in 1840, transportation was provided for twenty-nine years without legal authorization. In 1869 Massachusetts passed the first law in the United States authorizing pupil transportation. It provided that: "Any town in this Commonwealth



Busses provided for transportation of pupils living near Vineland, N. J.

may raise by taxation or otherwise, and appropriate money to be expended by the school committee in their discretion for the conveyance of pupils to and from public schools."

During the first twenty years after this enactment only five states passed laws authorizing free transportation to public schools; during the second score of years there developed a lively interest in the matter. Beginning about 1890, state followed state in rapid succession in making provision for pupil transportation. By 1910 the movement had fairly captured the country and thirty-one states were legally providing transportation for school children. By 1920 every state in the Union had begun to provide pupil transportation, either by specific legislative enactment or by the device of general legislative power.

In 1897 a committee of the National Education Association, reporting on ways and means of improving conditions in rural schools, recommended paying for pupil transportation out of public funds. In 1900 a chapter in the biennial report of the United States commissioner of education was devoted to the subject of school consolidation and pupil transportation. In 1910 a group of educators from the Southern states toured several neighboring states and visited scores of consolidated schools. On their return they strongly urged consolidation and transportation.

The rapidity of growth of pupil transportation is further shown by the following figures for three different periods—1920, 1924 and 1930. In 1920, 350,100 pupils were transported at a cost of $14,537,754; in 1924, 837,361 pupils were transported at a cost of $29,627,402, and in 1930, 1,887,210 pupils were transported at a cost of $54,823,143.

Recent studies of pupil transportation in many commonwealths indicate the importance of the subject and also indicate in an emphatic way many of the critical problems with which the movement is now struggling. Writing of transportation in Arkansas, Harry A. Little says:

"In Arkansas the transportation of school pupils has grown from a very unimportant part of the school work, a few years ago, to one of the most important functions of the school today. . . . During 1929-30 there were 655 busses transporting 24,173 pupils to school every day. Four years earlier there were 108 busses transporting 3,136 pupils daily. . . . This means that in four years there has been an increase of 506 per cent in the number of busses used and 607 per cent in the number of children transported."

Roe Lyell Johns, summarizing transportation figures in Florida, says: "In 1922-23, 7,681 pupils were transported at a cost of $249,685.66. . . . Four years later the number of pupils transported had increased to 32,782, and the costs had increased to $870,409. By 1930 these figures had increased to 44,161 and $1,031,768, respectively, an average

Wyoming school children travel in these busses to their classes in Laramie.

Four motor busses that bring country children to school at Albany, Ala.

year to year increment of nearly 40 per cent."

In Massachusetts in 1931 there were 1,119 school busses, while in 1925 only 250 school busses were in operation in the state. This item represents anywhere from 7 to 12 per cent of the total amount appropriated for schools. The average number of pupils transported daily in Tennessee in 1929 was 27,537, at an average monthly cost of $2.56 per pupil. In 1922-23 Utah spent $226,070 for pupil transportation and in 1927-28 that state spent $403,468.

Some of the present problems of pupil transportation, taken from various state reports and state studies, are: (1) mounting costs; (2) lack of good roads; (3) opposition of parents; (4) amount of time spent on the road going to and from school; (5) danger of physical injury to pupils; (6) social relations of pupils on school busses; (7) the practice of leaving tardy pupils to find their own way; (8) the suffering of pupils who must wait for busses in inclement weather; (9) the possibility that pupils may become ill during the day and be unable to return home until the school busses bring them; (10) inability of busses to reach their destinations in storms; (11) possible adverse effect upon country life; (12) fear of some parents that their children will be abused in the larger schools; (13) conviction of some parents that their children must wear better clothes when they attend the larger schools; (14) claim of landowners that taking the school away will reduce land values; (15) local jealousy, blind prejudice or sentimentality, and (16) lack of regulation, standards and satisfactory policy of school transportation.

The foregoing objections, while not equally valid, indicate that basic standards and principles should be established for providing pupil transportation. Such a set of basic principles follows:

1. School districts have only such powers as are specifically conferred upon them. They should, therefore, be authorized by legislative enactment to provide pupil transportation.

2. Such authorization should clothe the local school district with power to provide such transportation, or provisions in lieu thereof as seems proper, subject to the laws of the state and the rules and regulations of the state board of education.

3. Such authorization should be uniform through all districts of the state insofar as conditions warrant, and discretionary with local districts subject to the voice of the people and the standards, rules and regulations of the state board of education.

4. Legislation should make it the duty of the state board or department of education to adopt appropriate rules and regulations for the control and supervision of transportation in all school districts of the state regardless of whether or not state aid is provided.

5. Such rules and regulations should provide for uniform written contracts that should be required

throughout the state; qualifications and regulations for drivers of transportation vehicles; standards for vehicles used in pupil transportation and regulation for the care, repair, and rate of speed in driving them; regulations regarding the making and keeping of schedules; safety provisions and stops at dangerous crossings of railways or traffic lanes, and provisions for such forms and reports as will, in the judgment of the state board or department, make accurate and complete accounting.

6. Legislation should be enacted in each state making school districts or contractors liable for injury to pupils caused by negligence of themselves or their agents. Districts should also be required by law to carry appropriate and adequate insurance. It should be to the interest of the public that such insurance be state insurance on the order of workmen's compensation insurance.

7. All standards adopted by the state should be regarded as minimum standards beyond which any district may go at the discretion of the district board.

8. Since the purpose of transportation is to promote the equalization of educational opportunity, it should be financed primarily from state funds. However, state funds should be used only so far as is necessary to maintain state standards.

9. The state legislature should determine the penalty against any district that neglects or refuses to conform to established state standards, rules or regulations. Penalty should provide the necessary facilities under state supervision at local expense.

The Advance of Physical Education

"Fundamental Administrative Measures in Physical Education" is the title of a new book by Frederick Rand Rogers, which reveals the extraordinary opportunities for positive improvement in any educational field. The book bears out the predictions of many educational administrators that the past changes in physical education are slight as compared with those that are to come in the near future. Specifically, it outlines the administrative adjustments necessary to render physical education a positive and powerful force for the improvement of health and citizenship.

The book is more than a textbook on tests. It includes a bold and practical plan for the redirection of physical education through program reorganization based on valid, reliable and objective measures of pupil needs and the results of instruction. It is bold because it breaks so definitely with present practices throughout the nation, which usually ignore individual differences or concentrate on those who need attention least while ignoring those who need wisely guided physical exercise most—the physically deficient. It is practical because it is based on five years of experimentation, followed by six years of successful application in a large number of cities and villages. Moreover, it represents the first serious attempt to present systematically in a single volume the underlying philosophy and criteria of sound educational measures in its field, together with definite administrative procedures for use in public schools.

Many of the policies advanced by the author, who is dean of student health and physical education, Boston University, have been widely used in New York State for a number of years.

The book is published by the Pleiades Company, Newton, Mass.

Safety Rules for School Busses

A new law was passed by the last session of the Montana legislature for the purpose of providing greater safety in the operation of school busses. Some of the salient features of this new safety measure for school busses are as follows:

1. Every school bus shall be constructed so as to afford the driver thereof a practically unobstructed view of the roadway ahead and also to the right and left, and shall be marked in both front and rear with the words "School Bus." Every bus must have sufficient brakes, good signaling devices and proper lights.

2. All school bus operators must receive a certificate from the board of trustees of the school district in which his bus is to be driven, and must certify that he is at least sixteen years of age, of good moral character and competent. He must post a bond with the county superintendent in the sum of $1,000, conditioned for the payment of any damage that may be suffered by any person through carelessness or negligence of the driver.

3. Every school bus must come to a full stop before crossing railroad and electric car line tracks.

4. The driver must discharge pupils at the extreme right side of the traveled highway or at the curb at the right side of the street.

5. The driver of a vehicle when approaching the front or rear of a school bus that has come to a stop on a highway outside of town to discharge or receive children, should stop his vehicle not less than ten feet from the school bus and remain stationary until the bus has discharged or received its school children.

How One State Employs and Pays Its School Superintendents

Four types of superintendents are provided for in Pennsylvania's school code. Their salaries, their previous experience and training, their length of service and other pertinent facts are described here

By WILLIAM A. YEAGER, Assistant Director, Teacher Bureau, Department of Public Instruction, Harrisburg, Pa.

EVERY citizen of Pennsylvania has a certain interest in the one hundredth anniversary of the founding of the state's public school system, which will be celebrated in 1934. Much of Pennsylvania's progress since 1834, when the Free School Act was passed, may be ascribed to the benefits that its citizens have enjoyed as a direct result of the influences exerted upon them by the public school system. Today, this educational system reaches over the entire state, even to the most remote section. The threads of education and citizenship have been so closely interwoven that they can scarcely be considered separately.

1843 Saw First School Superintendents

A full appreciation of the remarkable development of the public school system is hardly possible without definite knowledge and a true estimate of the services rendered by those who have supervised it. While the need for supervision was recognized in the Free School Act itself, city school superintendents being elected as early as 1843, it was not until May 8, 1854, that a law was passed definitely recognizing a professional office in each county to be known as the county superintendent of schools.

In 1843 a law was passed providing for the district superintendency. A large number of superintendents were elected under this act, but they remained under the jurisdiction of the county superintendent. This law was repealed in 1854, and in 1867 provision was made to establish a real district superintendency that would not be responsible in any way to the county educational officer. School districts of 10,000 or more in population were permitted to elect such a district superintendent. The law of 1881 reduced the number of inhabitants required to elect a superintendent to cities, boroughs and townships of 5,000 population or over. The School Code of 1911 further defined classes of districts in Pennsylvania as follows: first class, 500,000 inhabitants or over; second class, 30,000 to 500,000; third class, 5,000 to 30,000; fourth class, under 5,000. Under this code, district superintendents may be elected in first, second and third class districts, that is, in districts with a population of 5,000 or more. Districts of the third class, however, which have not availed themselves of the opportunity to elect a district superintendent remain under the supervision of the county superintendent. The county superintendent has sole supervision of all schools in fourth class districts together with those schools in third class districts which have no district superintendent. The school code, however, permits boards of school directors in fourth class districts to elect supervising principals whose qualifications have been raised recently by the state legislature and the state council of education. These supervisory officers are under the supervision of the county superintendent.

What the School Code Provides

Provision for assistant county superintendents was first made in the School Code of 1911. As the counties grew in size and in educational facilities, it was realized that the job of supervision was too large for one educational officer. The school code provides that one assistant county superintendent may be appointed in counties having more than 150 teachers and not more than 350 teachers; that two assistant superintendents may be appointed in every county having more than 350 teachers and not more than 600 teachers; that three assistant superintendents may be appointed in every county having more than 600 and not more than 800 teachers, and that for each additional 400 teachers or fraction thereof, an additional assistant county superintendent may be appointed.

Associate and assistant district superintendents may be appointed in first class districts by the board of school directors upon the nomination of

the superintendent of schools. Assistant district superintendents may also be elected in second and third class districts.

County and district superintendents are elected on the second Tuesday of April, every four years. County superintendents are elected by the school directors of the county under the supervision of the county superintendent, who meet together in convention. District superintendents are elected by the school directors of each district entitled to elect such supervisory officers at a convention on the same date. At the last election, which was held in 1930, sixty-six county and 162 district superintendents were elected. Subsequent to the election of the county superintendents, 104 assistant county superintendents were appointed in the several counties of the state and twenty-three additional superintendents qualified as associate and assistant district superintendents in the first, second and third class districts.

The Act of 1854 which created the office of county superintendent, preconceived the appointment of only such officers as held the necessary professional qualifications. The Act of 1921 provides that a candidate for the office of county superintendent must be a person of good moral character, must hold a diploma from a college or some other institution approved by the state council of education or from a Pennsylvania normal school, and must have had six years of successful teaching experience, not less than three of which shall have been in a supervisory or administrative capacity. Superintendents who held office prior to 1921 were considered eligible for reelection on the basis of their former credentials. A study of the credentials submitted by the 66 county superintendents elected in Pennsylvania in 1930 shows that 39 are graduates of a college or some other institution of equal rank. Nineteen of the remainder are normal school graduates, while 8 hold qualifications under former standards. Of the 39 college graduates, 13 have secured a master's degree and 2 a doctorate.

Qualifications of Superintendents

One test of the growth of a supervisory officer in service is his desire to further his educational qualifications by taking additional training in a college or university. Fifty-one of the county superintendents have taken this additional training. Some of them have attended one or more sessions of a summer school. Others have taken additional courses looking forward to securing higher degrees. It is not to be presumed, however, that the test of an individual's growth in his profession is measured alone by the number of academic credits which he has accumulated in some accredited institution. It is difficult to contemplate any supervisory officer, whatever his relation to the public schools, who does not seek to progress with his profession by reading and study.

An index of a superintendent's preparation for his work is his previous experience. Fifty-five of the 66 county superintendents elected in 1930 had served previously in an administrative or supervisory capacity. Twenty-two of them were formerly supervising principals; 23, high school principals; 2, elementary principals, and 8, county superintendents. Ten became county superintendents after having had previous experience as teachers, while one was formerly a college instructor.

The records show that the median age of these officers for 1930 was fifty-one years, that 8 had reached the age of sixty years or more and that 6 were under forty years of age.

As to years of experience, county superintendents have served a median of thirty-two years in the public schools. One superintendent has served more than fifty years, while the youngest has had only fourteen years' teaching experience.

Turnover Is Small

The turnover in the office of county superintendent is small. Data on the 1930 election show that 11, or 20 per cent, of the superintendents are new in their present positions. Of the remaining fifty-five, the median length in service of each superintendent in his present position is eleven years. One superintendent has served as county superintendent for thirty-four years, and 9 have served five years or less. These facts show that the office of a county superintendent is not subject to sudden changes in personnel.

Of the county superintendents, 11 are new to their positions; 3 of those who were replaced retired at the end of their term of office, and the other 8 failed of reelection.

The school code specifies that county superintendents shall receive a minimum salary of $3,000 and a maximum salary of $4,500. The salaries of county superintendents elected in 1926 as compared mum. The average salary in 1930 was $4,575. Sixteen county superintendents receive a salary of $4,000 or less, and 1 receives a salary of over $10,000. The median increase in the salaries of county superintendents elected in 1926 as compared with those elected in 1930 is approximately $400.

A considerable number of superintendents were elected under the Law of 1843, which provided for a district superintendency. These district superintendents, however, were under the jurisdiction of the county superintendent. Upon the repeal of this law in 1854, considerable confusion resulted concerning the administration and supervision of schools in the various cities of the states. However,

in 1867, special provision was made for a real district superintendency apart from the jurisdiction of the county superintendent. Permission was given under the 1867 law to elect district superintendents in cities or towns of 10,000 inhabitants or more. Laws of 1881 and 1885 further extended the provision of electing a district superintendent to cities, boroughs or townships of 5,000 or more population.

The qualifications of a district superintendent are identical with those of a county superintendent. The school code, as amended by the 1931 state legislature, raised the qualifications for county and district superintendents and assistant superintendents. The amended code requires graduation from a college or university, six years of successful teaching experience, not less than three of which shall have been in an administrative or supervisory capacity, and also that the applicant shall have completed a college or university graduate course in education, which has been approved by the state council of education.

A study of the credentials submitted by the 162 district superintendents elected in 1930 shows that 137 are graduates of a college or some other institution of equal rank. Of the remainder, 23 are graduates of a state normal school, while only 2 do not hold graduation certificates from either of these two types of institutions. Seventy-six of these district superintendents have earned their master's degree, while 14 have secured their doctorate. This record speaks well for the supervisory officers in the first, second and third class districts. All but 25 of these superintendents have taken additional training in order to improve their professional status since graduation.

Tenure of District Superintendents

The district superintendents have had a median of twenty-six years' experience in preparation for their profession. This is approximately six years less than the length of service of the county superintendents. The tenure of a district superintendent is seven and a half years, which is shorter than that of a county superintendent. Of the 162 district superintendents elected in 1930, twenty-six are new superintendents in their positions, while 58 of them have served five years or less. Only 15 of these superintendents have served their districts twenty years or more.

As in the case of the county superintendents, all but 10 of the district superintendents elected in 1930 have served previously in an administrative or a supervisory capacity. Twenty-two of these have been superintendents of other school districts, while 8 of them rose from the ranks of teachers.

The median age of district superintendents is forty-nine years, or two years less than that of the county superintendents. Only 7 of them are under the age of thirty-nine years, while a like number have reached the age of sixty-five years or more.

Twenty-six district superintendents are new in their positions since the 1930 election, and three of these were elected to newly created superintendencies. Of the 23 superintendents who were replaced at the last election, 3 died in office, 3 secured other positions and the remainder failed at reelection.

According to the school code, boards of school directors electing a district superintendent shall determine the amount of his salary. The average salary of superintendents in a first class district is

AVERAGE SALARIES OF DISTRICT SUPERINTENDENTS OF SCHOOLS IN PENNSYLVANIA

District	*1922-26*	*1926-30*	*1930-34*	*Percentage of Gain* *1926*	*1930*
First Class	$12,000	$12,000	$15,000	0	25
Second Class	5,444	6,667	7,305	22	9
Third Class	3,936	4,562	4,998	16	9
County	3,802	4,041	4,575	7	13
Average	$ 4,104	$ 4,645	$ 5,277	14	13

See A Review of the Quadrennial Election of Superintendents of Schools in Pennsylvania, by Jonas E. Wagner, Pennsylvania School Journal, March, 1927.

$15,000; in a second class district, $7,305, and in a third class district, $4,998. The accompanying table shows that this represents a marked increase over previous years. These figures represent increases in salary to only 92 district superintendents, since 70 superintendents received no increase whatever over their previous salary.

At the present time there are 104 assistant county superintendents in Pennsylvania. The median age of the superintendents is forty-six and a half years, which is slightly lower than the median age of the other supervisory officers. Their years of experience are approximately the same as those of the district superintendents, namely, twenty-six years. There seems to be no general tendency in Pennsylvania to secure younger men for the office of assistant county superintendents. The records show that the median length of service of an assistant county superintendent in his present position is a little more than nine years. Sixteen such assistant superintendents were new to their positions at the 1930 election.

The educational qualifications of assistant county superintendents are not as high as those in other supervisory fields. Only 63 of the 104 assistant county superintendents elected in 1930 are college graduates, and 37 have had no training beyond that of normal school. A considerable number, however, have taken additional training in the

summer schools of colleges or universities or by means of extension courses.

As is the case of other supervisory officers, 79 of the assistant county superintendents advanced to their present positions through some form of principalship. The others were teachers immediately previous to their appointment.

The average salary of assistant county superintendents is $3,563, which is approximately $500 more than their average salary in 1926.

Twenty-three associate and assistant district superintendents are employed in first, second and third class districts. There are 4 associate superintendents in Philadelphia and five in Pittsburgh. Philadelphia also employs 10 assistant district superintendents. Chester, Dickson City, Erie, Norristown and Shenandoah each employ an assistant district superintendent.

The median age of these superintendents is fifty-three years. They have had a median of thirty-two years' experience in the teaching profession and have served approximately eight years in their present positions. Five of these superintendents hold a bachelor's degree, 8, a master's degree and 5 have received a doctorate. Eighteen of these superintendents hold a permanent college certificate. The average salary of these supervisory officers in 1930 was $6,374. Every superintendent serving in this capacity has had some previous supervisory experience, either as a principal in the same district or as a superintendent in another district.

Many second and third class school districts that have not elected assistant district superintendents employ one or more supervisors to perform this work. There are many types of organization in connection with the supervisory process in Pennsylvania.

Typical Superintendents

The typical county superintendent in Pennsylvania is a mature man, fifty-one years of age. He has had thirty-two years' experience in the public schools of the commonwealth before becoming a county superintendent. Unless he has reached the age of retirement he is reasonably sure of reelection. He has served eleven years in his present position. He holds a normal school diploma or a bachelor's degree, usually the latter, and has taken some additional training, usually in the form of one or more summers in a college or university. He has had previous supervisory experience as a supervising principal or as a high school principal. His salary is $4,447 and he has received a salary increase of approximately $400 since 1926. He supervises 330 teachers, having one and sometimes two assistant county superintendents to assist him.

The typical district superintendent in Pennsylvania is slightly younger than the county superintendent, being forty-nine years of age. He has had twenty-six years' previous experience in the public schools and has served seven and a half years in his present position. Previous to becoming a district superintendent he served as a supervising principal, or what was more likely the case, was advanced from the high school principalship to the superintendency in his own district. He holds a college diploma and a master's degree. He, like the county superintendent, has received additional training in college or university summer schools or from extension courses. He receives a median salary of $5,074, having had an increase of a little less than $400 since 1926. In first class districts he has supervision over 6,000 teachers; in second class districts, over 383 teachers, and in third class districts, over seventy-nine teachers.

Professional Advancement Is Noted

The typical assistant county superintendent is a man who has reached the age of forty-six years. He has served twenty-six years in the public schools of the commonwealth, having arisen to his present position through the supervising principalship or as a teacher. His position is usually as secure as that of his superior, the county superintendent, since he has served nine years in the same position. He is either a normal school or a college graduate and has taken some additional training since graduation. He receives a salary of $3,566, having had an increase of $500 since 1926.

The typical associate or assistant district superintendent is older than the above mentioned superintendents, being over fifty-three years of age. He has had the same amount of experience as a county superintendent, namely, thirty-two years. He has a master's degree and has received additional training. Since graduation he has risen to his present position through a principalship and has served over seven years in his present position. He receives a salary of $6,374.

Only one woman was elected as a commissioned supervisory officer in Pennsylvania in the 1930 election. However, 16 other women qualified for appointive supervisory offices; 13 as assistant county superintendents and 3 as associate or assistant district superintendents.

A comparison of qualifications of superintendents elected in 1930 with those who were elected in 1926 demonstrates a gradual professional advancement in the administration and supervision of the public school system of Pennsylvania. However, such professional advancement can at no time be greater than the leadership and foresight of those who are charged by law with the supervision of the schools.

A Glareless Lighting Unit Adapted to the Classroom

Shades or baffles of correct design are suitably placed to intercept glare producing rays; the whiteness of the light produced is another advantage of this new unit designed by

C. E. FERREE and G. RAND, Research Laboratory of Physiological Optics, Wilmer Ophthalmological Institute, Johns Hopkins Medical School, Baltimore

THE sharp increase of intensity which has been introduced in lighting practice within the past ten or fifteen years has raised again acutely the problem of fixture designing.

In earlier papers[1] we have called attention to the need for new types of lighting units, designed to protect the eye from the excessive glare that has been produced by the use of higher intensities of light. The older types of unit were devised for lights of moderate and low intensities and were scarcely adequate for the protection of the eye from glare, even for lights of these intensities.

In connection with our work on the National Research Council's committee on industrial lighting, we became impressed with the need of approaching the problem of glareless lighting from an entirely new angle. It seemed advisable to abandon wholly or in part the use of reflectors and to return to the use of shades or baffles of correct design, suitably placed for the interception of the glare producing rays. The great variety of simple and effective uses that can be made of the glare baffle in designing lighting fixtures presents interesting and fruitful possibilities. For the past several years we have been engaged in planning and adapting the use of glare baffles to lighting purposes, covering a wide range of situations. One of the results of this work is the unit to be described.

Indirect Lighting Is Wasteful

A brief and elementary review of principles seems appropriate at this point. Primitive lighting was accomplished by the use of unshaded sources. Later, shades were devised to protect the eye from the glare of the source. Still later, the insides of these shades were surfaced to give a high reflecting power in order to save as much of the intercepted light as possible and the shades were shaped to direct the light in different directions as wanted. Shades were then called reflectors or deflectors. All shades of necessity had openings of considerable size. These openings formed glare spots in the field of view, the brightness of which was increased in proportion as the reflecting power of the inner surface of the shade was increased.

One of the ways devised to conceal the opening from view is to turn it toward the ceiling. All the light is thus reflected to the ceiling and from there to the working plane, or from the ceiling to the

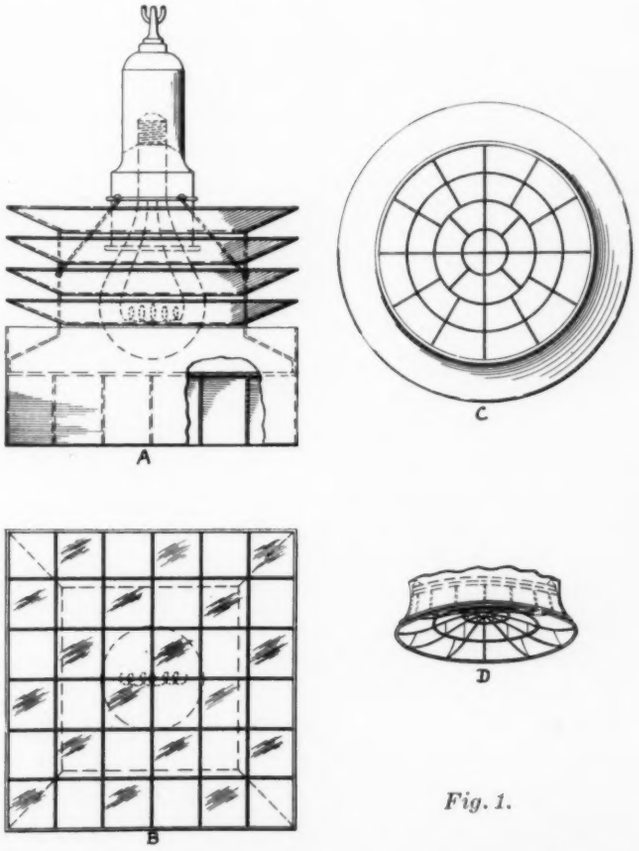


Fig. 1.

[1]Ferree, C. E. and Rand, G., Intensity of Light and Speed of Vision Studied With Special Reference to Industrial Situations, Part I, Trans. Illum. Eng. Soc., 1927, pp. 79-110.

walls and from there to the working plane. This method is known as indirect lighting, in contradistinction to direct lighting in which the light passes directly from the source to the working plane. Indirect lighting conceals the opening of the reflector from the eye but it gives a disproportionate and unnatural brightness to the upper part of the field of view. The ceiling, for example, even when uniformly illuminated at moderate intensities, is brighter than the work, and when high intensities are secured on the working plane, the ceiling is fairly ablaze with light. The indirect lighting method is wasteful of light; its efficiency is too strongly dependent on the color and reflecting power of walls and ceiling, and this dependence on walls and ceiling limits its use to the more favorable interiors.

Glare Should Be Eliminated

Among the evils of the direct method of lighting, as developed up to the present time, the following may be noted:

1. There is excessive and punishing glare from the lamp, from both lamp and opening of reflector or from the enclosing bowl of glassware which is sometimes used instead of a reflector.

2. Frequently the light passes to the working plane by direct radiation from the lamp or is directed from the polished inner surface of the reflector to the working plane without diffusion, thus creating a condition of maximum glare on the work.

3. In case an opaque bowl shaped pendant reflector is used, the ceiling and upper part of the room receive no light directly from the source and are unpleasantly dark in comparison with the lower part of the room. The glare from the unshaded opening of the reflector is intolerable and the effect on the eye is increased by the dark background against which it is viewed.

4. In case a translucent pendant reflector is used, more light reaches the ceiling and upper part of the room, but in proportion as this is the case, the surface of the reflector glares.

5. In case a translucent inverted reflector is used, the proportion of light passing towards the upper and lower parts of the room depends upon the density of the reflector. In proportion as the amount of light passing to the lower part of the room is increased, the glare from the reflector is increased and we approach as a limit the characteristics of direct lighting with a pendant opaque reflector; and in proportion as the amount of light reflected to the ceiling is increased, the glare from the reflector is decreased but the ceiling and upper part of the room become disproportionately bright.

6. In case an enclosing globe or housing of glass or other translucent material is used, a better distribution of light is obtained but the glare from the source is reduced only in proportion as there is absorption of light by the enclosing glass.

In all the aforesaid devices created primarily for eliminating glare from the source, comparatively poor success has been attained. Moreover, the success that has been attained is at the sacrifice of either intensity or uniformity of distribution of light, or both.

For the welfare of the eye, glare should be eliminated at any cost. But in doing this it is desirable in most lighting situations to retain as nearly as possible the distribution natural to the lamp and in all cases to waste the least possible amount of light.

The unit to be described is, in effect, a lamp shade with baffles or shields disposed on sides and bottom to give maximum protection from glare and minimum waste of light. It has the following objectives: (1) To eliminate all glare from the source of light. (2) To reduce the glare from the work to a minimum by diffusing the light before it reaches the plane of work. (3) To provide a lighting unit free from reflecting surfaces which deteriorate with use and quickly lose their reflecting efficiency because of the collection of dust. (4) To retain as nearly as possible the type of light distribution that is given by the lamp. (5) To give ceiling, walls and objects in the working plane brightnesses which are not objectionably different. (6) To accomplish all of these results with the minimum loss of light.

A Glareproof Lighting Unit

Rather than wastefully absorb light in all directions in a futile and misdirected attempt to eliminate glare, this unit, by means of specially designed and positioned baffles, intercepts only those rays traveling in the critical directions and allows the free passage of all others. To produce the desired effect, not only must the baffles be properly shaped and positioned with reference to the filament of the lamp, but their surfaces must be made nonreflecting. If they are made reflecting it is obvious that the glare is merely transferred from the lamp to the outer surface of the housing.

Both surfaces of the baffles in the unit are painted a flat black. Without this protective feature glare cannot be completely eliminated. The unit in question, correctly proportioned and constructed, seems to eliminate glare just as effectively for a 1,000-watt lamp as for a 25-watt lamp. In fact, the unit may be regarded as glareproof for all intensities coming within the range of lighting practice.

At A in Fig. 1 is a side elevation of the unit slightly broken away at one point to show the construction of the bottom baffle; a bottom plan view of the unit is shown at B, and at C and D, modified forms of the bottom baffle are shown. These modified baffles were designed more especially to be used with a unit of circular shape, but they may be used also with a unit of rectangular shape. Fig. 2 is a photograph of a rectangular type of unit in operative position and of the lighting effects produced. This photograph gives a fairly correct representation of the appearance of the unit when illuminated, but a comparatively poor representation of the lighting effects actually obtained on the ceiling.

How the Unit Is Constructed

The construction will not be described in detail. The unit consists essentially of a housing or enclosure made up of side baffles; a shallow box beneath these baffles; a baffle or louver across the opening at the bottom, and immediately above the bottom baffle a plate of glassware having a high coefficient of transmission and diffusion.

Side baffles consist of upwardly and outwardly inclined vanes or plates spaced apart in a vertical direction by a distance equal to or slightly exceeding the vertical distance between the top and bottom plane of each plate. Each of the plates is a hollow frame which may have a rectangular, circular or other shape to conform to the shape of the horizontal cross section of the enclosure. The plates are supported on the bottom casing or supporting plate by means of wire frames, with provision made for changing the spacing as shown in the drawings or in any other suitable manner. The breadth of these plates, their number, the distance at which they are spaced apart, their angle of inclination and their relation to the lamp filament are all important features in securing the desired effects.

The bottom baffle, shown at B of Fig. 1, has a cellular construction similar in appearance to an egg crate. It consists substantially of two series of vertical partitions extending across the opening of the enclosure at right angles to each other. The partitions extending in each direction are parallel. In the present model they are spaced apart by about two inches and are approximately two to three inches wide. Through the downwardly extending passages formed by these partitions, the greater part of the light is allowed to pass to the plane of work, only such rays being intercepted as will produce glare in the eyes of persons working in the various probable positions in the room. To one directly or almost directly under the unit, glare is experienced only when the eyes are directed upwards. In all other positions in the room the eye is completely protected in all directions.

In order that the protection shall be complete, both surfaces of the partitions are painted flat black. When the unit is installed in the proper position in the room and at the correct distance from the ceiling, the opening is seen from various positions in the room either as not luminous at all or as having a dull luster or a soft silvery sheen of low brightness that does not cause annoyance or discomfort to the most sensitive eye.

At C of Fig. 1, baffles are arranged in the form

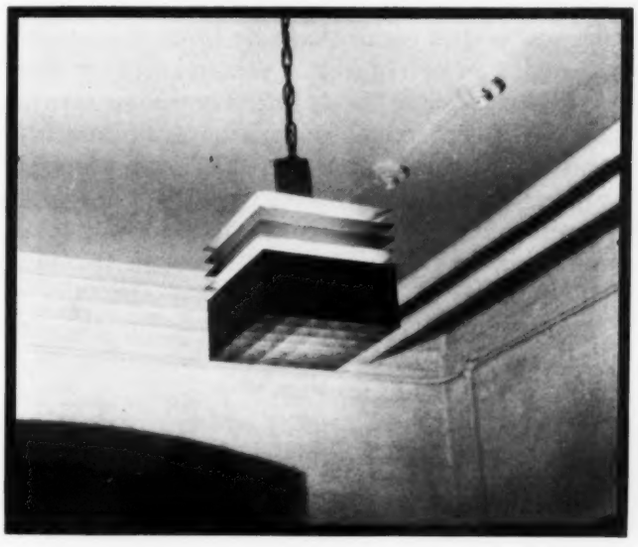


Fig. 2.

of concentric circles. Partitions circularly disposed, however, shield the eye completely only when the gaze is directed along the common radius of the circles. In all other directions glare is experienced. In order to shield the eye in all directions radial segments are inserted between the circles at suitable places. While good results are obtained with this form of baffle, it has not been found so completely satisfactory as the egg crate type shown at B.

At D of Fig. 1, partitions forming the baffle are both circular and radial. The radial partitions are curved so that the appearance is that of a bottom slightly convexed upward. Intersecting the radial partitions at suitable vertical levels are circular partitions. Either illuminated or dark, this baffle gives a pleasing effect. Both this baffle and the type shown at C, however, obstruct the downward passage of light more than the cellular or egg crate construction shown at B.

In order further to protect the eye from glare, the lamp socket is provided with a downwardly extending canopy or glare shield which encloses all the bright parts of the socket and lamp. In the greater number of even the better lighting units

in use at the present time these parts have a high brightness and are objectionable and disturbing to the eye. This canopy is shown at A of Fig. 1. It may be painted the same as the outer surface of the box-like construction at the bottom of the unit, in which case it harmonizes with this part of the unit when the light is turned off. Or it may be given a darker shade to harmonize with this member when the light is turned on. In the latter case much more complete protection is afforded to the eye.

Because of the relatively high intensity of light which it is bound to receive, the surface of this canopy should in no case have a high coefficient of reflection if due regard is to be given to the welfare and comfort of the eye. In units so completely glareless as these, it is surprising to note what a small amount of brightness difference is required to become noticeable and even distractingly annoying to a sensitive eye.

From this canopy, as shown at A of Fig. 1, the shade enclosure is supported by means of downwardly extending wires, the socket and canopy being in turn supported from above by means of a chain or stem depending from the ceiling or in some other suitable manner.

The bottom of the unit is so constructed that the baffle and diffusing plate may be readily removed for the purpose of replacing the lamp or for cleaning the upper surface of the diffusing plate. The diffusing plate thus far used is of imported Belgian flashed opal glass, both surfaces of which are smooth.

Details of Design Can Be Easily Remedied

The unit described here and represented in the drawings and photographs is a laboratory product, constructed to illustrate a principle. It has not had the benefit of skillful and esthetic design. The photograph shown in Fig. 2 is also a laboratory photograph, in no way retouched or modified to improve the apparent lighting effects.

In the model shown at A of Fig. 1 the boxing or housing at the bottom of the fixture is doubtless deeper than necessary, thus entailing a greater loss of light than is strictly necessary. This is a detail of design that can be remedied without serious difficulty. Also, if desired, the light can be directed or lifted from the boxing by the use of a lamp with a silvered ring of suitable breadth and placed at a suitable distance below the filament of the lamp. We have used such a lamp with good results. The baffles are given a slightly higher brightness but the amount of light delivered to the room is increased. The reflecting ring obviously may be either on the lamp or detached from it. A reflecting device of a different shape may also be employed. The sides of the box can be made of art glass or other glassware of suitable density.

A totally indirect unit, a floor stand, table and desk units, a bed lamp, a unit for the lighting of lecterns, all involving the use of glare baffles, have also been constructed and will be described in later papers. A glareless ward light for hospitals has already been described.[1]

No One Type of Fixture Is Adequate

The above list, it will be noted, includes a totally indirect unit. It has been demonstrated by laboratory tests and by years of successful practice that indirect lighting has many excellent features. One of these features is the superior diffusion of light. Our intention in designing an indirect unit was to preserve these desirable features and to correct or eliminate certain others that have been considered undesirable. The need for designing a line or variety of fixtures involving the use of the glare baffle is to provide glareless units to meet the great variety of situations that are found in lighting practice. No one type or kind of fixture is adequate for this.

A further important advantage of the unit as already indicated, is the whiteness of the light produced. This is due to the fact that the natural whiteness of Mazda light is not changed by the presence of surfaces which reflect selectively. Commercial reflectors, even silvered glass, change the color of the light towards red and yellow because of selective reflection. That the difference is marked can be readily seen by making a direct comparison of the color of the direct and of the reflected radiation. It is somewhat surprising to find how much of the objectionable color of artificial illumination is entirely due to the reflectors employed.

Glare and color of light are generally recognized as the two outstanding problems in hygienic lighting. The use of the principles herein described not only offers a solution to the first of these problems but also makes a definite contribution to the second. Means ordinarily employed for color correction are so wasteful of light as to be prohibitive for general use. The most desirable method of color correction is unquestionably an increase of temperature of the source. This not only gives a whiter light but it greatly increases the luminous efficiency. The final and practical solution of the problem of color correction, so far as solution is possible, will probably come through the use of sources of still higher temperature in connection with glareless, nonreflecting housings.

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[1]Ferree, C. E. and Rand, G., Glareless Lighting for Hospital Wards, The MODERN HOSPITAL, June, 1932, pp. 128-138.

Elimination of glare, color correction and increase in lighting efficiency will thus be accomplished together.

With reference to color correction the following points should be noted:

1. Uncorrected artificial light has a great deal of color. Illuminated with it, the printed page has an orange or yellow hue. On such a background black letters and other printed and written characters do not stand out as clearly as they do on white. The sensation difference between black and color is always less than that between black and white.

2. Uncorrected artificial light is "fuzzy"; corrected light is smoother in quality. There is probably better focusing for the corrected light and less veiling glare through scatter of light by the media of the eye. The clearer vision which is obtained with light properly corrected for color and composition is very helpful to old eyes and eyes having residual refractive errors or defective vision from any cause whatever.

3. Uncorrected light is irritating to many supersensitive and pathologic eyes. To a great number of persons whose eyes are thus affected, night work is made possible and even comfortable by the use of light corrected for color.

4. The benefit of increase of intensity of light is greater for corrected than for uncorrected light, as is also the tolerance of high intensities. The tolerance of glare for colored light is comparatively low.

5. At all intensities the eye works with greater precision, speed, comfort and efficiency under white light than under colored light.

Colored Light Handicaps the Eye

While the eye has developed color reactions, it has also developed rather elaborate means of getting rid of the reactions for the greater part of seeing. The color reactions have been developed in complementary pairs. The maximum saturation of color comes at intensities far below those which give an adequate working illumination. The maximum saturation of spectrum colors comes at less than one-tenth of a foot-candle. Any increase of intensity beyond this level results in a loss of saturation. Thus, with reference to the intensity scale alone, nature has provided that the eye shall not work under light of maximum color. The adaptation to the chromatic component of the excitation is much more rapid than adaptation to the achromatic component. That is, when acted on by colored light the eye rapidly loses its power to give the color reaction. Obviously the eye was not intended to see and work under what is ordinarily called colored light.

Individual Differences and Guidance in Secondary Education

From a study of provisions for individual differences in 8,594 selected schools, the National Survey of Secondary Education discloses that comparatively few schools are making thorough provisions for individual differences. The investigation reveals that the problem of providing for individual differences grows more acute as the proportion of population registering in the high schools increases.

In the study of individual differences in the selected schools, twenty-eight provisions were noted. Provisions for individual differences are, in general, innovations. The five most frequently reported were: (1) provision for variation in the number of subjects a pupil may carry; (2) special coaching of slow pupils; (3) use of the problem method; (4) differentiated assignments, and (5) advisory program for pupil guidance.

Four Types of Guidance Programs

The report reduced the twenty-eight provisions for individual differences to seven categories: homogeneous grouping; special classes; plans characterized by the unit assignment; scientific study of problem cases; variation in pupil load; out-of-school projects and studies, and advisory or guidance studies.

A special phase of the survey deals with guidance. The investigators state unequivocally that the character of modern education demands guidance. Changes in the social and economic order requiring adjustment make more significant the need of bringing counsel and guidance to boys and girls. Guidance is considered necessary to prevent waste in the process of education.

The examination of various guidance programs revealed four outstanding types: (1) centralized bureaus of guidance for secondary schools in city systems, represented in the study by Boston, Chicago and Cincinnati; (2) city school systems with a central guidance organization but with the individual secondary school considered the unit in the program, represented by Providence, R. I., and Milwaukee; (3) centralized bureaus or departments in individual secondary schools, represented by the Milwaukee Vocational School and the Township High School and Junior College, LaSalle, Ill., and (4) central guidance organizations in individual secondary schools which utilize regular officers and teachers as guidance functionaries, represented by the Joliet Township High School and Junior College, the Thornton Township High School and the New Trier Township High School, all in Illinois.

An Elementary School Principal Talks About Research

The modern tendency to make the curriculum fit the individual pupil increases the need for intensive study into methods of recognizing and providing for differences

By HARLEY W. LYON, Principal, Henry W. Longfellow School, Pasadena, Calif.

DIFFERENCES in individuals have been recognized since time began. The leader of his tribe maintained that position because he possessed two qualities to a greater extent than did his fellows—physical strength and ability to outwit opponents. Even today, these are the qualities that we endeavor to pass on from one generation to the next—intelligence and physical well-being.

Only recently has education attempted to analyze these differences and provide for them. Recognition of individual differences indicates that these differences are so mixed in individuals that it is impossible to separate pupils according to one trait or ability without finding that those same pupils are hopelessly mixed according to another. The boy who is slow in arithmetic may be a leader in music or athletics. The girl who is the best reader in the class may have little ability to get along with her fellow pupils. Some who are school bright are life dull, and some who are school dull are life bright.

The Teacher Must Analyze Her Pupil

The present trend in the provision for individual differences is toward mixed groups, with the individual teacher responsible for the complete development of every pupil in her room. She must make a careful diagnosis of every pupil early in the school year. She should find the strengths and weaknesses of each. She must then provide for the further development of the desirable traits and abilities, and for the elimination, so far as possible, of the weaknesses. This diagnosis must cover the whole child—physical, mental, moral and social. Obviously, this calls for a highly trained, thoroughly conscientious, broadminded and sympathetic teacher. If these qualities are to be required of the teacher, they must also be required of the principal.

This change or trend in education, which considers the whole child, accounts to some extent for the varied type of work being carried on in modern schoolrooms. There was a time when reading, writing and arithmetic were considered the essentials of education. Today they are no more essential than attitudes, good habits, physical condition and ability to meet and work harmoniously with others.

Trend Is Away From the Marking System

When reading, writing, arithmetic and other academic subjects were thought to be all-important, the system of marking success or failure of a pupil was naturally formal and definite. The percentage system was adopted universally and there was a great difference between 91 and 92 as a mark on an examination or as a final mark in a course. The change in marking systems has been gradual but decided. From the percentage system using numbers from 75 to 100 as passing marks, we moved to "Excellent," "Very Good," "Good," "Fair," "Poor," "Failure." This was followed by "Excellent," "Good," "Fair," "Failure," and now, in elementary schools we often mark "Satisfactory" or "Unsatisfactory," with "Excellent" only in cases of outstanding achievement.

The trend in elementary schools is toward no marks at all, but this does not mean that no records of achievement will be kept. Records intended to help teachers better to understand pupils will probably increase rather than decrease, and improved ways of making those records available to teachers will be devised.

Closely related to school marks are failures. By failure I mean repetition of work. Only a few years ago failure of a pupil was so closely connected with marks that if at the end of a semester failing marks were received by a pupil in two of his major subjects, he must repeat the whole semester's work. This was true regardless of how strong he might be in other ways. The present tendency is toward

no connection between marks and repetition of work. A pupil may receive unsatisfactory marks in all recorded subjects and still be promoted. Repetition of work is now decided upon the basis of what will be best for the whole child. With the change of emphasis from formal academic subject matter to the consideration and development of the whole child, the number of failures has been materially decreased.

One device being used for the development of the whole child is the activity program, defined by our state department of education as "a school curriculum which provides a series of well selected activities for different levels of growth; which offers opportunities to children to engage in worth while, satisfying experiences while carrying out their most worthy and most challenging purposes."

A true activity program allows the child to live fully and in real situations. If he learns through a natural development of what comes from within himself, he will remember. Knowledge is real and permanent when it comes as a result of the child's own interest and effort. The activity program helps to do these things and will probably remain in use because it seems fundamentally sound. Modifications will occur from time to time, but the trend in education is toward more, and not less, activity on the part of the child. With added activity there must be more and more freedom. With freedom there must be control, the ideal being a satisfactory and satisfying self-control on the part of the pupil.

Research Defined

Now that we have traced the changes and developments of one phase of education—that of recognizing and providing for individual differences of pupils—in order to call attention to the need and use for research all along the line, let us avoid possible misunderstandings by clearly defining the terms "research" and "problems of elementary education."

Research is the diligent, systematic, critical search for truth. It includes the finding of facts, but it is more than that. Research requires reflective thinking of a high order and an attitude of mind that looks ahead, is honest, takes nothing for granted, and accepts results as they appear.

Problems of elementary education are unlimited in number. Every change in economic conditions or in living conditions brings with it new problems in the school. Even in the absence of changed conditions there are many questions concerning procedure that require research.

Educational research as we understand it today was unknown until about thirty years ago. Up to that time there were opinions but for the most part past practices were accepted without question. Since that time, however, diligent, systematic critical search for truth has been going on and progress in educational development has been marked. Homogeneous grouping has been attempted as a direct result of research. Courses of study have been changed to fit these groups as a result of research. Individual differences have come to light through research.

Problems of Interest to the Principal

Making the individual teacher responsible for the development of the pupil increases the need for research—to determine methods of diagnosing pupils, to determine ways of increasing strengths and decreasing weaknesses, to determine the essentials in education which may change from time to time. Research must tell us the constituents of the whole child and guide us as to records kept and marks given. Research finds the value, if any, in repetition of work. Only continuous research can show us the real accomplishments of the activity program, the final outcomes of increased freedom and the results of our attempts to develop the whole child. In fact, the entire process of providing for individual differences depends upon research.

Research in elementary education was started early, the *Forum* establishing in 1902 the first department of educational research of record. Its purpose, in part, was: "to aid in the development of definite ideas in regard to what elementary schools can and should do, and the best means of doing what they set out to accomplish." Surveys and standardized tests have always been closely associated with research.

Problems of elementary education that should interest every principal are: (1) educational goals and curriculum content in view of the change of emphasis from the teacher and the course of study to the child; (2) many phases of child study; (3) remedial teaching; (4) educational guidance; (5) clinical study of problem children; (6) parent education; (7) the problem of the school failure; (8) progressive developments in education; (9) the exceptional child; (10) an unlimited number of studies of administrative and supervisory procedures and details.

Study a Problem Each Year

The elementary school principal should develop an attitude for research. Study on one special problem each year adds to the interest of school administration. In one such study, Relationship Between Standardized Test Results in Elementary School and Teachers' Marks in Junior High School, over 500 pupils who had graduated to junior high school from elementary school during the past five years were considered. Standardized test results

that had been gained in elementary school were recorded on filing cards. Teachers' marks from junior high school records were likewise recorded on the same cards. Scattergraphs were made and correlations computed. Fifty-two relationships were determined and the following results were discovered:

1. In all cases the coefficient of correlation between standardized test results in elementary school and success in junior high school as determined by teachers' marks was found to be positive and significant.

2. Intelligence test quotients or educational test quotients or their averages in elementary school, have almost exactly the same degree of correlation with teachers' marks in different grades and in different subjects in junior high school.

3. Standardized test quotients in elementary school and all teachers' marks in junior high school have a coefficient of correlation of .37 which is rather low.

4. Standardized test quotients in elementary school have the highest correlation, by grades, with teachers' marks from Grade 8, the order of highest correlation being: Grade 8, Grade 7, Grade 10, Grade 9.

5. Standardized test quotients in elementary school have the highest correlation, by subjects, with teachers' marks in mathematics, the order of high correlation being: mathematics, English, social science, science, foreign language, commercial subjects, music and art, industrial arts and home economics, physical education.

6. The order of highness of correlation of intelligence test quotients in elementary school and all teachers' marks in all subjects in junior high school is: Binet Individual Intelligence Test, .56; Terman Group Intelligence Test, .42; National Intelligence Test, .38; Detroit Alpha Intelligence Test, .20.

7. The order of highness of correlation of educational test quotients in elementary school and all teachers' marks in all subjects in junior high school is: Stanford Achievement Test, .43; Thorndike-McCall Reading Test, .31.

8. National Intelligence Test scores and National Intelligence Test quotients in elementary school, when compared with all teachers' marks in all subjects in junior high school, produce almost exactly the same coefficient of correlation: quotients, .33; scores, .34.

9. Stanford Achievement Test scores in elementary school when compared with all teachers' marks in all subjects in junior high school show a higher coefficient of correlation than do quotients: quotients, .43; scores, .51.

10. Stanford Achievement Test scores and quotients in elementary school both show higher coefficients of correlation with all teachers' marks in all subjects in junior high school than do National Intelligence Test scores and quotients: Stanford Achievement Test—scores, .51; quotients, .43. National Intelligence Test—scores, .34; quotients, .33.

11. The Binet Individual Intelligence Test quotients in elementary school show the highest coefficient of correlation with all teachers' marks in all subjects in junior high school of all comparisons made between test results and teachers' marks, .56.

12. Of the two subjects required of all students in all grades in junior high school—English and physical education—teachers' marks in English have next to the highest correlation with test quotients, while marks in physical education have the lowest correlation with test results.

13. Elective subjects in junior high school draw to themselves students of varying degrees of intelligence and achievement as determined by test results in elementary school, foreign language being outstanding in the high rating of the students. In spite of this, the average teachers' mark in junior high school is lowest in foreign language.

14. The coefficient of correlation between intelligence test quotients and educational test quotients as determined in this study is very high, .82.

How Home Influence Affects the Pupil

Another study is being made of the relationship between certain achievements of 800 pupils in a school and contacts between the school and the home. Each pupil in the school is being marked on health, scholarship, leadership and citizenship. Every contact between school and home in the interest of a pupil is being recorded by teachers, secretary, parent-teacher association, workers and school nurse. While final results are not yet available, a preliminary survey indicates that: (1) Children whose parents make many contacts with the school in their interest are not quite as healthy as are those whose parents do not contact the school; (2) Children whose parents make many contacts with the school in their interest stand a little higher in scholarship, leadership, and citizenship than do those whose parents do not contact the school; (3) Children whose parents are members of the parent-teacher association stand a little higher in scholarship, leadership and citizenship than do those whose parents are not members of the parent-teacher association.

From the standpoint of community relationships, if for no other reason, this study has been valuable. Parents have cooperated in collecting data and will be interested in the results.

The School Plant:

How Do You Buy Your Coal—by Weight or by B. T. U.'s?

By FRED W. FROSTIC, Superintendent of Schools, Wyandotte, Mich.

SELECTION, contract, delivery and testing of fuel are problems of prime importance in economy and efficiency of operation of the school heating plant.

Heating costs are affected by many variables. Costs not only vary with the quality and actual price of fuel, but with the type and operation of heating equipment, air circulation requirements, type, size and use of building, losses due to exposure or leakage, varying seasonal demands and personnel efficiency. Coal is the most widely used type of fuel for schools. Through careful selection of type and quality, contracting in terms of heating value, weighing and testing of delivered fuel, keeping careful records of the quantities consumed and its behavior in actual practice, considerable economy can be effected in the operation of school plants.

Definite Information Is Necessary

There is a growing need for definite information regarding the efficiency of fuel consumption in school heating systems. Large industrial plants have found it necessary to study fuel requirements and heating plant operation carefully. Elaborate scientific testing and recording mechanisms are in common use in such plants. Steam producing equipment has had the attention of the best type of engineering skill. The results of these practices are read directly in the dividend checks of the stockholder. In contrast with this there are few school plants where even the quantity of coal that has actually been consumed during a stated period is known with any degree of accuracy. Certain definite information is therefore necessary regarding heating needs and existing efficiency before adequate specifications for the intelligent selection of coal can be made or the low operating efficiency now everywhere evident corrected.

Transportation expenses make up the large part of coal costs. Schools that are situated in or very near adequate coal producing centers will probably economize in heating costs by using the coal from that area. Types of boilers or furnaces, grate area and draft for such systems should be selected to meet the best ideal burning conditions for the coal available. Most school systems however have a rather wide distribution of coals to select from. The executive should therefore select the type of fuel after a careful study of the needs of the school plant and the specifications may then be worded accordingly.

Adequate information can best be obtained regarding quantities of fuel consumed by providing for the weighing of coal as it is loaded in the bin on the way to the furnace or boiler. The type of scale should be adapted to the loading device. For most purposes a large platform scale set even with the track or floor so that the coal car or buggy must pass over it on the way to the boiler will be found quite inexpensive and adequate. A dated chart should record the net weight. Records should be continuous and should not be kept for temporary experiments only. It is only through accurate quantity information that one can proceed to build up definite data regarding the performance of the heating unit.

Specifications concerning volatile matter, fixed carbon, limits of fusing point of ash, sulphur, moisture, and the number of B.t.u. best suited for the plant in question can best be determined after a study of the performance of the plant, adjustment of operating conditions, instruction of personnel, and consultation with competent combustion engineers when possible. Further information regarding the suitability of coal types for certain usages may be obtained from the current number of the *Coal Catalog*.[1] This valuable catalog contains complete information regarding the coals of the United States with a complete directory of all coal mines. It is particularly valuable in checking analyses of coals upon which proposals have been made.

The bidding blank, specifications and contract may be combined in one form. The first page should be the bidding blank and should contain such information as the commercial name of coal,

[1] Keystone Consolidated Publishing Co., Pittsburgh.

name of mine, location of mine, railroad on which located, shipping point, name of coal bed, operating company, complete guaranteed analysis and price.

The contract and specifications should state the bidding requirements and method of determining the awarding of the contract, procedure for sampling and testing, delivery conditions, method and basis of payments. A sample of the analysis requirements for West Virginia 4-inch lump coal as determined for a certain group of school plants follows: fixed carbon, not less than 55 per cent; volatile matter, not less than 40 per cent; moisture, not to exceed 3 per cent; sulphur, not to exceed 1.5 per cent; ash, not to exceed 4.5 per cent; fusing point of ash, not under 2,700°; B.t.u., not less than 14,200.

Cheap Coal Is Sometimes Expensive

The analysis should be submitted by the bidder on a guaranteed basis. Computations in awarding contracts are made on the basis of the analysis furnished. All price adjustments on coal delivered are made on the basis of tested coal analysis in comparison with the guaranteed analysis. In the awarding of the contract, bids are compared as to quality of coal offered by adjustment to a common basis. The four variables—ash content, moisture content, heating value and price per ton—are merged into one figure, the price per 1,000,000 B.t.u. Table I shows the tabulation of six recent bids. All these bids met the specifications as to analysis. Bid No. 1 being the best price on the basis of the guaranteed analysis was awarded the contract at $4.39 per ton, the analysis showing the cost per evaluated 1,000,000 B.t.u. to be 15.0738 cents.

While in these six bids the lowest price per ton also corresponds with the lowest price per million B.t.u., this is not always the case. There are numerous instances where the lowest price per ton has proved to be one of the most expensive coals. The determinations for evaluating the various bids in cost per million B.t.u. are as follows:

a. All bids are adjusted to the same ash percentage by selecting as the standard the coal having the lowest percentage of ash. The difference in ash content between any given bid and this standard is divided by 2 and the price quoted in such bid is multiplied by the quotient. The result is added to the price of bid.

b. The price determined under a. above is divided by the difference between 100 per cent and the percentage of moisture guaranteed, the result being computed to the nearest tenth of a cent.

c. The price as determined under b. is multiplied by 1,000,000 and the result divided by the product of 2,000 times the number of B.t.u. guaranteed.

Provision must also be made for protecting the consumer against bidders who are unable to carry out the terms of the contract either through lack of equipment and organization or through financial inability. Bids should further be rejected when coal is known to contain undesirable physical characteristics from the standpoint of storage, failure to meet smoke ordinances or other causes that make it unsuitable for use in school plants.

How Adjustments Are Computed

Samples of delivered coal should be obtained at once on delivery, placed in tight containers and submitted to a testing laboratory. The number of tests necessary is determined on the basis of the amount of coal delivered and the number of shipments it is necessary to sample. The average of these tests is taken as the basis for final adjustment unless certain of the tests fall so far below the requirements that the coal is rejected. The method of computation is as follows:

a. No adjustment for price is made for B.t.u. if the variation from the guaranteed analysis is not greater than 2 per cent. If the variation is 2 per cent or more the following formula is applied:

$$\frac{\text{B.t.u. of coal delivered}}{\text{Guaranteed B.t.u.}} \times \text{contract price} = \text{payment price.}$$

b. In the same manner, no adjustment in price

TABLE I—TABULATION BIDS MAY 31, 1933, ON 4-INCH LUMP COAL

Bid No.	*1*	*2*	*3*	*4*	*5*	*6*
Price per Ton	$4.39	5.29	4.70	4.50	4.66	4.86
Fixed Carbon	63.08	56.40	57.24	59.50	56.94	57.24
Volatile	33.30	38.16	38.40	37.00	36.81	38.01
Moisture	1.00	1.41	2.53	1.75	2.02	1.93
Sulphur	.56	.93	.72	.65	.74	.54
Ash	4.50	4.03	3.83	3.50	4.23	2.82
Fusing Pt. (degrees)	2.800	2.725	2.730	2.700	2.900	2.700
B.t.u.	14,832	14,295	14,361	14,750	14,427	14,625
Price per 1,000,000 B.t.u. (cents)	15.0738	18.8810	16.8731	15.5786	16.5994	16.9422
Price rank	1	6	4	2	3	5

is made for ash variation unless it exceeds 2 per cent of the guaranteed analysis. In case of a greater variation the difference between the ash content as guaranteed and the ash content by test analysis is divided by 2 and the quotient multiplied by the bid price, the result being added to or subtracted from the price as determined in a.

c. The price is further corrected for moisture by multiplying the bid price by the percentage in excess or deficiency of the amount the guaranteed analysis varies from the tested analysis. The result is added or deducted from the price determined in b. Table II illustrates a recent case from actual practice.

TABLE II—ADJUSTMENTS FOR NUT AND SLACK COAL, 1933

	Guaranteed Analysis	*Test Analysis*	*Price Correction per ton*
Fixed Carbon	57.84	59.91	.....
Volatile Matter	35.08	35.64	.....
Moisture	2.12	3.89	—6.9207 cents
Sulphur	.63	.66	.....
Ash	4.93	4.45	+.9384 cents
Fusing Point of Ash	2700	2650	.....
B.t.u.	14,396	14,236	.....
Price per Ton	$3.91		$3.85

In this case the dealer was penalized for excessive moisture. On the other hand he received a premium for reduction in the amount of ash. In 1931 one dealer was penalized 9 cents per ton because of high ash low B.t.u. In 1932 the contractor received 15.91 cents per ton premium and the school system benefited by the higher quality of coal.[1]

How the Local Newspaper Can Help the School

Pointing out that the school cannot advance far beyond the understanding of its community, Dr. G. H. Vande Bogart, president, Northern Montana College, says that one of the most potent agencies for placing accurate factual material concerning the schools before the people is the newspaper.

School news should be continuous. The sudden concentration of school items in the press carries with it too often the connotation of high pressure methods. This policy usually accompanies efforts to influence public opinion upon a school issue. A stream of interesting school items week after week promotes friendly understanding and goodwill. Failure to provide continuous publicity results sometimes in criticism or opposition to school procedures because they are not fully understood. It is infinitely better that information should be given frankly and completely before opposition arises, rather than be published under pressure of criticism and as a defensive measure.

Personal aggrandizement is to be as sharply avoided as is institutional propaganda. This does not preclude giving credit for leadership and achievement of members of the corps. Personal names may well appear from time to time, but not too frequently or without good reason.

[1]Copies of complete coal specifications as prepared for the public schools of the city of Wyandotte from the U. S. Bureau of Mines Standards and the determined requirements of the school system may be secured from the author. Enclose 15 cents to cover cost of mimeographing and mailing.

Radio School for Long Beach Pupils Following Earthquake

How can we have schools without school buildings? This is the question that confronted the school board of Long Beach, Calif., following the recent earthquake.

The problem was solved with radio, according to a report sent to the U. S. Office of Education by Eunice Bradley, Long Beach.

"Two radio programs were inaugurated on April 3," according to Miss Bradley's report, "one in the morning over one station, and the same program in the afternoon over the other radio station. These programs consisted of lectures by teachers from the different schools. Radio lectures were followed by assignments which the pupils were expected to hand in to their teachers the following day. In case the radio should not be accessible to every pupil, the lectures were also printed in the local newspapers daily.

"At first the radio school started with the four essential subjects of general science, social science, English and mathematics. Later, talks on the history and appreciation of art, instructions on health, and music were added. Assignments in music included the further use of the radio for the appreciation of symphony concerts.

"Five thousand pupils of the five junior high schools of Long Beach attended this radio school, and on the whole they seemed to enjoy it.

"Long Beach is considering incorporating this radio school with its educational system."

A Correction

In the article on "A Uniform Nomenclature Is Needed for Special Classes," by J. E. W. Wallin, published in the June issue of The NATION'S SCHOOLS, the recommended name for borderline and backward children was erroneously given as "special class or school." This should have read "opportunity class or school."

Editorials

The Fiscal Answer

AFTER all possible internal budget economies have been made and all expenditures adjusted to the present economic price levels, the sums of money required for public education will continue to be an extremely heavy burden.

Since the major function of education is the socialization of the individual through the transmission of the cultural heritage, it seems reasonable to assume that the activity must follow and express social need. This being true, there can be little hope of creating a static and fixed system of education so long as our general culture is so dynamic in character and subject to sweeping changes such as have characterized the past thirty years. There seems to be no evidence that education as an activity will become simpler or cheaper.

The second question is whether the country can afford education. So long as our present social philosophy prevails the country cannot afford to slight education. It is as vital during the period of economic readjustment as it was before and as it will be after. It is one of the few means by which the people may rest assured of any possibility of real social control in the future. Considered relatively, expenditures for education are just as vital as expenditures for national defense, for the maintenance of government and for economic stimulation.

The answer to this second question must be in the affirmative.

Does the problem lie outside the field of public education? In a large sense, we believe that it does. Much of the present difficulty is not due to the inability of the community to support an adequate system of education, but rather to the form under which it is carried on. There are three considerations that require careful attention.

The first of these is our present system of taxation. The unusual burden on the general property tax, local, school, county, state, and in many more instances extra special assessments, simply make this manner of revenue production theoretically and practically unsound. A small portion of wealth is being assessed for a major portion of the essential services. If the tax burden were equitably distributed, the present social program would not be so difficult to carry. The remedy also appears quite simple. In the income tax, as the best long time instrument, the state has the possibilities of tax equalization that are unlimited in their scope. The stepping up of inheritance taxes is another means for terminal equalization. Both of these methods will make possible the more equitable distribution of the burden and should relieve real property from the staggering burden it now carries. The sales tax may be considered chiefly as an interim emergency measure of meeting revenue needs partially and easily during the present crisis.

The second consideration is the toll levied on the people through the maintenance of extravagant units of local government. In the northern sections of the country this type is best exemplified by the obsolete township unit. In more sparsely settled areas inadequately sized counties with their unnecessary officials are a distinct social liability. The overlapping of county and city governments in metropolitan centers is wasteful, and creates duplication of activities and officials. The elimination of extravagant local government would immediately result in the saving of many millions of dollars in almost every state and hundreds of millions in the nation as a whole.

Parallel examples of extravagance in local government include the inadequately sized school districts, which are, in point of number, the average rather than the exception in the legal organization of public education. While in the main the heritage of pioneer days, these districts also reflect the use in many of our village areas of the school as bait for a trading area. As a result of tradition, localism, small town pride and commercial ambition there is much useless expenditure of public monies. These inadequate school districts may be matched with the useless township government.

These facts are generally recognized and accepted by informed laymen as well as by students of the social sciences. It seems that the situation might be easily corrected. Appearances are deceptive. The organization of interested officeholders, the social lethargy of the people, the weighty tradition of localism and inertia, all combine to make reorganization difficult. Until the gross inadequacies of our tax structure are corrected, the extravagances of local governmental units and of financially incapable school districts changed through the development of a more logical and more clearly functional legal structure, the costs of education and the costs of government are going to be increasingly burdensome. There appears to be no alternative.

School men can serve by creating a definite public opinion with respect to the specific organization needs of the schools.

Need for an Ethic

REVELATION of the extent of flagrant and deliberate violations of the copyright in published material by individuals and institutions, as partially reported by Dr. Guy M. Whipple, is nothing short of astounding. That such abuse of the principles of common honesty should exist in institutions laying claim to ethical superiority is to be decried. While analysis in many cases indicates that a few may be credited to ignorance, the majority represent instances of deliberate appropriation of other people's goods. This abuse of copyright restrictions is not confined to any single individual or institution. Public schools, private schools, colleges and universities all seem to be tarred with the same stick.

The solution seems to lie first of all in a better institutional knowledge of copyright law and next in the growth of an ethic that frowns on practices of this type. The publishers and holders of copyrights might also be of greater assistance by agreeing on a general policy and standing firmly together in its execution. If sufficient publicity is given to all cases, where the violation is obviously intentional, and prosecution follows flagrant abuse, it will require only a short time before certain members of the profession recognize the dangers attendant on these illegal acts. Every superintendent and principal may also assist by bringing knowledge of copyright law before supervisors and teachers. Each institution of higher learning might cooperate effectively by giving due and full notice of the dangers of copyright violation to staff members. So long as the institution of private property exists it is essential that individuals be given full legal protection from generalized theft of their creative efforts.

Local Buying Is Often Poor Economy

THE rapidity with which "buy local" and "buy American" movements are gaining in velocity and strength must be looked upon with grave concern. Up to the present our economic order has been characterized as one of individual freedom and regional interdependence on a large scale. Free from internal tariff barriers, we have developed industry in localities apparently most suited to it. The continuity of our system depends on the maintenance of both concept and practice of free regional exchange of products. Any movement that attempts to ignore this situation merely complicates the situation in the long run and is as great a threat to a return to normal business as any one of a number of related factors.

One or two illustrations may suffice to make this clear. Michigan makes most of the automobiles. Many of the essential school supplies and equipments are manufactured in neighboring or distant states. If Michigan boards of education adopt the "buy local" policy and this practice spreads to other states it would be nearly fatal for the economic welfare of Michigan. Restriction on purchase of products from outside of the state would inevitably call for reprisals on automobiles by states whose principal manufactured products were affected by this embargo. The ultimate result would be stalemate for all concerned.

The "buy local" movement also takes strange twists and turns that do not result in real economy for the community involved. Recently we heard of a situation where a school board purchased on direct bid certain items of equipment. A manufacturer outside of the state was low bidder. The bid was accepted. A local retailer who carried another line of similar goods protested. His protest was backed by the ever present high pressure secretary of the chamber of commerce. The board was forced to revoke its decision. Equivalent material was then purchased through the local dealer at a much higher price. The "buy local" idea in this place was expensive to the local taxpayers in dollars and cents.

Much muddy thinking and shortsighted practice seem to be developing in school districts with respect to "home purchases." In terms of our economic system "home purchasing" is probably one of the most extravagant and shortsighted procedures in which we can engage. General revival of trade is not going to be brought about by any adolescent notions of making further restrictions through setting up psychologic and actual barriers to trade. Any considerable extension of this tendency is sure to muddle the entire situation still further. The condition offers an excellent opportunity for educational leaders to educate school board members to the elementary fallacies in this plan and to reestablish the policy of free trade between the states.

Don't Forget the 84 Per Cent

ANTI-EDUCATIONAL propaganda of unusual cleverness is abroad. This propaganda is tending to bring into the same camp opponents of progressive measures in education who have to pay most heavily for such improvements and that 84 per cent who, while paying little, reap most of the fruits of such an improvement program.

While this is no time to advocate new, untried

and expensive educational procedures, it is certainly not the time to curtail educational plans that have been evolved, tested and found useful during the past three decades in caring more adequately for this 84 per cent.

Until recent years our educational system has been tuned to the needs of the 16 per cent who in 1930, according to Phillips, entered college. The needs of that great group who will never go to college have been largely ignored. We did not know their interests, their unique abilities or their ambitions. No program was available to assist them in attaining their ambitions had they been known.

To understand better this great mass of our student population, we have established, tested and approved services performed by visiting teachers, school nurses, a new type of attendance officers, vocational counselors, guidance directors and psychologic clinics. These men and women, specially trained, have been able to help this group of pupils solve their school, home, personal and life problems more adequately.

To meet the school and vocational needs of these pupils, courses have been added, subjects have been expanded and revised, pupils have been sectioned upon the basis of interest and need, special classes and schools have been organized to meet unusual needs and teachers have been encouraged to spend more time in pupil adjustment.

Despite the obvious need, the services of these trained persons are being eliminated in the name of economy; they are being eliminated, moreover, at a time when, as never before, there is a crying need for a greater understanding and a greater appreciation of the needs of school children. In the name of this same economy, curricular additions are being dropped and the basic curriculum, that leading toward college entrance, is being emphasized. Buildings are so overcrowded and teachers so overloaded that it is increasingly difficult to adapt a school program to the numerous needs of the 84 per cent.

This crisis unquestionably serves to call our attention to the need of maintaining and gradually expanding our public school program so that this larger group may be cared for just as adequately as have the 16 per cent in the past. Is not this present drive towards tax reduction causing parents to forget the heritage that a few years ago they demanded for their children? Is it not causing citizens to forget the 84 per cent of oncoming citizens who will not enter college? Unless we take steps to call a halt in present trends, are we not headed in the direction of creating an American peasantry which can readily be ruled and swayed by those in power, instead of developing a citizenry capable of self-government?—*Arch O. Heck.*

One Place to Save

AMERICAN tradition has placed membership on a board of education in the category of altruistic and unselfish service for the social welfare of the community.

The evolutionary concept of the elected district board is that of a planning and appraising body with the executive activity completely delegated to trained professionals. There are a few exceptions to this general rule. This tradition of community service has also considered the payment of a salary as unnecessary and more likely to bring into membership individuals attracted by the monetary reward rather than by the wish to serve.

In general, the tradition of the amateur as opposed to the professional school board member has been upheld. There are numerous exceptions in many states. Salaries now paid in these exceptional cases vary from one hundred to fifteen hundred dollars annually. Expenditures of this type are not reported separately to the Office of Education but are buried in general administrative expense. A conservative estimate would place the total annual sum expended for board of education salaries between five and six million dollars.

While not a significant total for the nation as a whole, this does represent a real and unnecessary burden in the smaller districts where most of these salaries are paid. If all of the board of education salaries were turned back to the general budget and used for essential textbooks, supplies and equipments the schools would certainly benefit at this most critical time. In many districts the expenditure of the total legislative salaries might easily mean the difference between present instructional inadequacy and a satisfaction of supplementary needs. Five million dollars devoted now to the replenishing of exhausted stocks would be more than helpful.

In the light of function, there is no occasion for the payment of salaries to board members. The great weight of tradition supports this contention. The practice is further largely confined to those smaller districts that can ill afford the spending of a single dollar for other than direct and supplementary instructional needs.

The remedy is simple. Board members may be brought to realize the condition and also the well understood American tradition, of community service without reward to the schools, and may refuse to vote themselves salaries. Such action would be extremely praiseworthy. The development of an aggressive public opinion in this field, through the parent-teacher organizations, would also be helpful in situations where board members do not realize the emergency need.

Happy to Say— By WILLIAM McANDREW

MY NEIGHBOR, Ezra Hawkins, the sage of Setauket, remarked this evening that if a man courts an orn'ry girl, marries her and goes on loving her, first thing you know she's a firstclass wife. Ann Arbor Woody, Columbus Lindquist and Evanston Melva, all of them college professors, have written a book showing that this same treatment will do wonders in turning a poor school system into a top-notcher.

WHY do teachers make good wives? Because their business trains them daily in affection, patience and planning. When they learn to talk less—oh boy!

IN OLD China a man could divorce his wife for being a chatterbox. An Ohio superintendent has refused to recommend reengagement of a man teacher "because, though repeatedly warned, he does all the talking; the children get no chance."

AT a schoolmasters' convention in Colorado a superintendent told me he had become conscious that his vocabulary of compliment was so small that he had written in his notebook a homemade lexicon of praise. "To get the best results," he said, "I must become an expert encourager."

IT IS enheartening to note that the researchers' discovery that failure soon weakens effort has resulted in the disappearance of the old type of teacher who marked children low to spur them on. The modern teacher is as careful to keep failure out of her children's work as is the physician to ward off germs.

IF YOU file one sheet a day as a record of worthwhile things done, you soon have as strong a desire for these things as the well known avidity of any kind of collector.

YOU need to balance your living budget, actually to plan so many hours a week for work, for sleep, for the care of your body, for recreation. It is as valuable as financial bookkeeping, a thing to put in black and white, to test with trial balance and an audit.

AND don't forget this: Big and necessary as teaching is, always capable of absorbing more and more of your strength, it ought not to monopolize your life. Set down a fair amount of time such as you would exact of an employee. Set down how much for recreation you would allot your daughter if she were teaching. Then be fair to your job and yourself and live your program.

YOU can shorten the time it takes you to recover from a blow. A good tree bends before the blast and straightens at once.

MOST every mind, even a superior one like yours, is a sieve and doesn't hold even the best that comes into it. Develop the notetaking habit. Taking notes means taking notice. It sharpens your observation and stimulates your thinking. Do it carefully. Use the detachable leaf, card file size of pocket book. Write carefully in ink from a pocket pen and put the slips in a handy box. They will entertain you in days to come and show you one of the happiest of changes—growth.

A PERSON lost is supposed to be disturbed. But what happier people have you seen than those who lose themselves in doing good work?

BECAUSE you want happiness is no proof that you are entitled to it. Forget it. There are too many other things worth working for.

SHORT, not-yet-surpassed rule for executives and administrators—Thomas Briggs' slogan —organize, deputize, supervise.

IF YOU are traveling in the wrong direction, the faster you go, the farther away you will get from where you'd better be. Maybe the speed at which a class progresses is not important if the destination is not worth reaching.

MY WORST malady is laziness, but, Lord be thankit, I know the cure.

I'M glad that Frederick Tilney has shown how the brain grows only with use and that in most people it has been worked at about one-fifth its capacity; in none, more than one-half. There's hope for America, yet.

BUSY laziness consists in keeping yourself engaged with secondrate things as an excuse for not tackling the big ones. This can be cured by setting a date for completion of an important task and by engaging someone to keep asking about it. A promissory note is a good boss.

Your School—
Its Construction and Equipment

A Department Conducted by CHESTER HART, B.Arch., Chicago

Daylight Projection of Pictures in the Classroom

A projector for glass slides and opaque materials that does not require a completely darkened room may be used advantageously in the classroom where notes must be taken. Direct sunlight must not fall upon the screen when the new model Balopticons, made by the Bausch and Lomb Optical Company, Rochester, N. Y., are used, but otherwise the room may be lighted either artificially or by ordinary daylight. Eye strain has been further avoided by the balancing of light used in the illumination of opaque material and transparent slides so that the intensity of the screen image is approximately the same with either type of material. Sud-

den expansion and contraction of the pupil of the eye are thereby prevented.

The use of a translucent screen for projection makes it possible for the teacher to stand beside the screen, lecture on the subject and operate the machine without the aid of an assistant.

The projector is made in several different models, the most elaborate being the KOSB which projects both opaque and transparent material, and has a blower attachment for air circulation within the box. The air blower sends a stream of cool air over the opaque material that is being projected so that overheating and warping are prevented regardless of the length of time the material is in the machine. Opaque material up to 6 by 6 inches, or a 6-inch square section of a book, magazine, newspaper, or map may be projected.

The light used for projection is a 500-watt prefocused Mazda lamp. For opaque projection the light is reflected by a diffusing parabolic reflector that eliminates shadows of the bulb and filament anchors, and ensures an even brightness over the entire surface. For slide projection the lever on either side of the machine is given a quarter turn to eliminate the reflector and balance the light used so that the screen image is not unpleasantly bright by comparison. This projector may be operated from the ordinary lighting circuit outlet.

The fully equipped KOSB model weighs twenty-five pounds, and is equipped with handles at the front and rear of the machine for easy portability. The overall dimensions are, width, 8½ inches, length, 19 inches and height, 18½ inches.

The other models in this group are an opaque and slide projector without a blower, an opaque projector with a blower, and a projector for opaque material without the blower attachment.

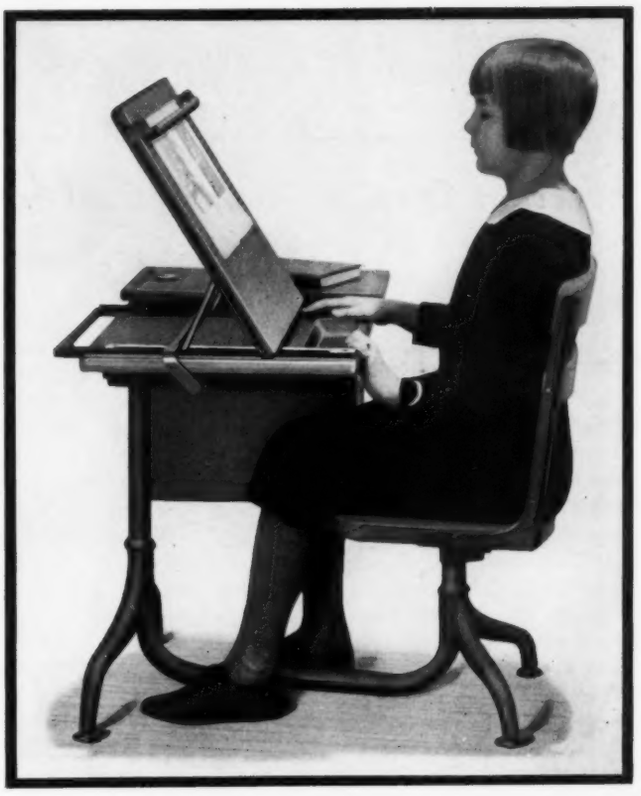
Eyesight Conservation for All Schoolrooms

In designing and equipping schools the major consideration is to provide classrooms that are conducive to health, sanitation and eyesight conservation. To what extent eyesight conservation affects the selection and arrangement of materials may be only partially realized, but it is a large factor in the arrangement of windows, the color and finish of walls and woodwork, the location of blackboards and the intensity and distribution of artificial light. To prevent impaired vision and to improve defective vision have been definite aims in school building design and construction, not only for special sight-saving rooms but for all rooms. Despite these precautions, the eyesight of many pupils has been impaired during their school years.

Influences outside the classroom affect eyesight, but there has been a growing conviction that other factors in the classroom, besides those mentioned, must also be taken into consideration. Among these is the school desk. The desk has a decided bearing on the posture and general health of the pupils, and may in turn have both a direct and an indirect influence upon eyesight.

Assistance in the correction of impaired vision and the preservation of normal vision has led to the development of the Henderson-Universal Desk made by the American Seating Company, Grand Rapids, Mich. It is an all purpose desk for general use in classrooms, art rooms, music study, science and group work, and study halls, as well as for special sight-saving classes.

The Henderson Ner-Far desk top is adjustable for height, and is divided into two sections. The right section covers the book compartment, which is accessible by raising a compression hinged lid. The lid is noiseless in operation, and cannot be slammed. The new feature of the desk is the left section which is the sliding and tilting top designed for eyesight conservation. This top may be moved forward from the normal position to approximately two inches nearer the pupil, and from that position it may be moved from the pupil to a point allowing a latitude, when the top is tilted, of eleven inches for focal variance. Normal variance is about four inches with a focal distance of twelve to sixteen inches. Focal distance that is greater or less than these figures indicates that there is defective vision or improper conditions, or both, and proper steps for correction should be taken. Another adjustment allows the top to be tilted so that light glare is minimized and the best angle of vision may be obtained according to the task of the moment, whether it is a writing, drawing or reading angle that is needed.



The desk is a movable type mounted on a steel tubular frame with the rear legs placed to utilize the pupil's weight for added stability. The front legs are within the perpendicular of the desk box which permits a grouping of desks, face to face, in table formation for group work. The feet are solid steel disks with broad surfaces to minimize the marking of mastic, linoleum, hardwood or other types of floors. Three frame sizes are available, with the book boxes and desk tops the same on all sizes. The overall size of the top when flat is 17½ by 28 inches; tilting area, 17½ by 18¼ inches and the book box is 8 by 14½ by 12½ inches deep. The weight is approximately 65 pounds.

The seat is adjustable for height, it is shallow from back to front, and is cut away at the back edge in the shaping to eliminate any ridge. The back of the chair is left open to permit the pupil to sit well back on the seat. There is a self-adapting support slat for the lumbar section, and the upper slat gives support to the thoracic region. The seat is mounted on a swivel permitting ease in turning to the working position or outward when leaving the desk.

NEWS OF THE MONTH

Educators Criticize "Economies" Effected by Chicago Board of Education

Criticism of the board of education, Chicago, in its ruthless and unintelligent manner of effecting "economies" was voiced by the 175 educators attending the Institute for Administrative Officers of Higher Institutions at the University of Chicago during the week of July 10, in the following resolution:

"As a group of citizens deeply interested in the improvement of education in the United States, we have read with concern and dismay the action taken by the board of education, Chicago, in discontinuing a number of activities which have been developed in the educational system of that city during recent years. It is our belief that the financial difficulties under which the Chicago school system has been suffering in recent times are due chiefly to the antiquated and inadequate taxing system under which the city carries on its activities. The resources of this country are certainly adequate to provide its young people with the type of education which has been found to be demanded by a democratic civilization. All of the nations of the earth are finding that expansion of educational opportunity for the common people is the only safe and wholesome policy.

"We deplore, therefore, the backward step taken by the board of education in reducing the seventh and eighth years of the school system to the level of elementary education. The junior high school is a natural outgrowth of the improvements that have been made in recent years in the American educational system.

"The development of courses in physical education and health is an expression of the growing conviction which has been accepted not only in schools but in all phases of public life that cooperative endeavor is more efficient and economical than individual effort. The health of municipal communities has been greatly promoted through attention in the schools to matters of hygiene and physical training.

"The other eliminations of school opportunities which have been made by the school board could in a number of cases have been avoided if the school board had courageously faced the just demand that the costs of maintenance, including janitorial service and supplies, be adjusted to the real needs of the schools.

"Finally, it is our firm conviction that when a group of citizens on the school board assumes to rearrange the educational facilities of the schools and to neglect entirely in so doing the expert advice of a competent superintendent and central educational staff it is time for a serious consideration of the desirability of eliminating altogether from the control of this highly technical service incompetent and untrained representatives of the community who are obviously appointed to the board to serve political rather than educational purposes."

Educators Must Convince the Public, Says Zook

Educators must convince the public that the money spent on education has been justified in its results and that, despite the large amount involved, has been spent economically, according to Dr. George F. Zook, recently appointed U. S. commissioner of education. "People look at a report of the spending on education and say 'here cut it down,'" Doctor Zook explained. "It is up to us to show them that the money has been spent economically. We must have education get the approval it has had all these long years and carry the burden ourselves rather than criticize those who oppose the spending. What we must now do is to get something sufficiently constructive to sell education to the American public and help the citizens under the new economic conditions."

According to Doctor Zook, the direct federal aid to education from the $3,300,000,000 public works program fostered by President Roosevelt cannot be considered now. Under the program, however, funds for the erection of school buildings, he points out, will be eligible on the same basis as for other public works. Any aid other than a building program, according to Doctor Zook, is a matter of the future, as there are no funds immediately available for direct help to education in the matter of salaries or other adjuncts of education financing.

Buffalo Will Spend $1,000,000 on Schools

The school board, Buffalo, N. Y., at a recent meeting, ordered plans prepared for three new school building projects. The plans ordered were for a new building for School 37, Carlton and Orange Streets, a new Kensington high school and an addition to South Park High School.

The cost of the three projects is expected to exceed $1,000,000 and it is hoped that a portion of the cost will be defrayed out of federal funds under the relief appropriation to cities.

Report Shows Cost of New York City's Schools

Out of every hundred dollars spent by the department of education, New York City, last year, $96.90 was used directly to defray the expenses of instructing pupils, providing recreation for them and maintaining the school plant. Administration and miscellaneous expenses accounted for the remaining $3.10. These figures are included in the board of education's annual financial and statistical report for 1932.

An examination of the figures reveals the fact that out of the $96.90, $88.81 was spent for actual instruction, including playgrounds and recreation centers; $5.44 was devoted to the physical operation of the plant, including the heating and cleaning of all school buildings, and $2.65 was used for maintenance of the plant with necessary repairs and replacements. Included in the $3.10 spent for administration and miscellaneous items was the cost of the Bureau of Child Guidance, the study of retardation and payments made under the Workmen's Compensation Law.

SEALEX
Wall-Covering

A remarkable new wall-covering with a unique combination of good qualities. It need never look soiled—because it is stain-proof and washable. Cannot fade or crack—therefore never needs to be "done over." Lasts the life of the building in which it is installed. Offered in many luxurious patterns that rival the most costly walls in beauty.

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NEWS OF THE MONTH

New York City Broadens Vocational Education Work

Steps toward broadening the field of vocational education in New York City's continuation schools have been taken by the board of education in changing the name of the Central Commercial Continuation School to the Central School of Business and Arts. Three other former continuation schools have had their names changed to the Staten Island Vocational High School, the School of Printing and the Central Needle Trades High School.

School Administrators Hold Annual Conference

The fourth annual school administrators' conference was held at George Peabody College for Teachers on August 2. The theme of the conference was "legislation, departmental regulations and economic changes during the last two years affecting the southern states, with proposed programs of progress for each state."

The conference was unusually fortunate this year in having the program conducted by the state superintendents of education of various southern states.

Round table discussions followed each state superintendent's report. At the evening session Dr. Shelton Phelps, a member of the State Board of Education of Tennessee, summarized the changes in the South as a whole, as presented during the day.

The various state reports were delivered by the following persons: Virginia, Sidney B. Hall, state superintendent; Louisiana, T. H. Harris, state superintendent; Kentucky, J. W. Cammack, Jr., state director of research; Alabama, John W. Abercrombie, former state superintendent; North Carolina, A. T. Allen, state superintendent; Mississippi, W. F. Bond, state superintendent; Texas, L. A. Woods, state superintendent; Florida, W. S. Cawthon, state superintendent; Arkansas, C. M. Hirst, state superintendent, and Tennessee, W. D. Cocking, state superintendent.

New School of Research at U. of Southern California

A new school of research, organized within the graduate school, University of Southern California, and emphasizing original research by candidates for the Ph.D. degree and by faculty members, is announced by R. B. von KleinSmid, president of the university. Dr. Rockwell D. Hunt is the director of the school.

"Establishment of the new school is in recognition of the unique position of the University of Southern California in the field of instruction and guidance of students at the highest stages of preparation for their professions or scientific careers," according to Dean Hunt.

Membership in the school of research will be granted to students who are formally admitted to candidacy for the Ph.D. degree. Visiting research scholars in Los Angeles may likewise be recognized, and under special conditions other recommended graduates already holding the master's degree may be elected to membership by the graduate council.

A graduate department of the college of letters, arts and sciences was formally organized during the academic year 1910-11. In 1920, in order more adequately to meet the increasing demands of qualified candidates and to provide enlarged opportunities for graduate study and scholarship investigation, the graduate school was established.

In 1924 the graduate school announced that the university had decided to enter upon the important task of offering advanced graduate work leading to the degree of doctor of philosophy. The first degrees were conferred in 1927, and each succeeding year has witnessed the completion of requirements for the doctorate by qualified candidates, this year's group of fourteen being the largest.

Establishment of the new school of research at the university is in harmony with the trend toward a rather sharp division between the masterate, or fifth year, and the real graduate work of research in preparation for the doctorate. It is expected to be an aid in preserving the best traditions of the highest earned degree—for only scholars showing research ability and future promise will be admitted.

Pupil Transportation Shows Big Increase in Texas

Approximately one-twelfth of the total enrollment of white pupils in the schools of Texas are transported to school, according to William Eilers, state department of education. The reports of the county and city superintendents show that 95,541 pupils were transported at a cost of $1,403,313 during 1931-32.

According to the state department of education, 14,677 pupils were transported during 1925-26 at a cost of $329,870. The 1931-32 figures represent an increase of approximately 81,000 pupils, or a yearly sevenfold increase in six years.

This tremendous increase in the transportation of pupils has been mainly due to the law permitting the consolidation of smaller schools, which was passed four years ago. A bonus was paid out of the state aid fund to high school units for partial or complete consolidations.

Consolidations and transportation have greatly reduced the number of small schools in Texas. In 1917-18 there were 6,173 one-teacher schools, and at the time of 1931-32 school term the number of one-teacher schools in Texas had been reduced to 2,001. This represents a reduction of 4,172 schools of this classification.

Seek Federal Funds for New York City Schools

The sum of $4,056,552 in federal funds is being sought by the board of education, New York City, to finance the construction of two new high schools and the completion of sixteen other schools now under construction. This is part of a $94,058,023 loan which the city is attempting to secure under the terms of the national industrial recovery act.

The two high schools for which funds are being sought will be built in Queens and on Staten Island. Among the schools to be completed are the Samuel Gompers Industrial High School, the Bronx; the Brooklyn Technical High School, Brooklyn, and the Staten Island Vocational High School. These three schools have been erected but funds are needed to provide furniture and equipment.

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RAY LYMAN WILBUR, *General Editor*

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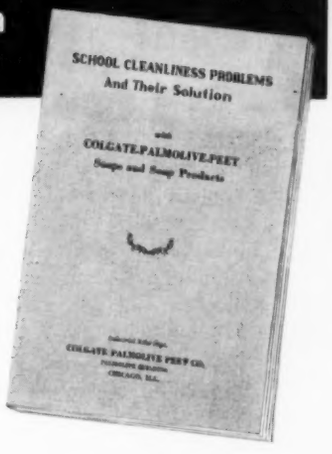

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NEWS OF THE MONTH

New York Association of Colleges and Universities Will Meet in Albany

The New York State Association of Colleges and Universities will hold its annual meeting in Albany on October 12, in connection with the university convocation. Dr. Samuel P. Capen, chancellor, University of Buffalo, will preside.

The morning session will be devoted to a consideration of the subject of "Continuity of Education in Secondary School and College." Dr. William S. Learned, Carnegie Foundation for the Advancement of Teaching, will present the secondary school view, and Dr. Herbert E. Hawkes, dean of Columbia College, Columbia University, will present the college view. It is expected that Dr. Harry W. Chase, the newly elected chancellor of New York University, will speak at the association's annual luncheon.

The afternoon session will be devoted to a continuation of the subjects presented at the morning session. An invitation will be extended to all high school and college representatives attending the convocation to attend the meetings of the association and the luncheon.

Dr. Henry T. Moore, president, Skidmore College, is chairman of the program committee. The other members of the committee are: Dr. James L. Meader, president, Russell Sage College, and Dr. Murray Bartlett, president, Hobart College.

Two Types of Schools Studied at Conference

A conference sponsored by the summer demonstration school of Teachers College, Columbia University, and by the progressive Education Association to consider the fundamental differences of the traditional and the progressive school was held on July 17 and 18.

Dean William F. Russell was chairman of the conference and the speakers included: James F. Hosic, Rollo G. Reynolds, William C. Bagley, William H. Kilpatrick, Harold O. Rugg, Patty Smith Hill, George S. Counts, Lois H. Meek, John K. Norton and Jesse H. Newlon.

Leaves Large Gifts to Educational Institutions

The will of the late James Loeb leaves Harvard University gifts amounting to $805,000, to be expended chiefly for research in Greek and Latin literature and for increasing the salaries of tutors and assistants in the department of classics. Mr. Loeb graduated from Harvard in 1888. Mr. Loeb's classical library is also left to the university.

A bequest of $500,000 is made to the trustees of the American School of Classical Studies at Athens, in the form of a trust fund, the income to be used to pay the expenses of archeological excavations.

A separate German will disposes of Mr. Loeb's art collection and his rare musical instruments. The residue of the estate, said to amount to $1,000,000, is left to a fund for research in psychiatry, with headquarters in Munich, Germany.

Manhattan Loses 33 Per Cent of Its Pupils in Ten Years

During the ten years ending June, 1933, Manhattan lost one-third of its public school pupils in average daily attendance in elementary and junior high schools. This statement is revealed in attendance figures contained in the annual financial and statistical report of the board of education, New York City, for 1932, which has recently been released.

The Manhattan pupils in the two groups dropped in number from 258,286 to 172,561, a loss of 85,724. More than 80 per cent of the loss was in school districts in the east side of Manhattan Island, in the district bordered by the Brooklyn bridge and 120th Street.

Home Economics Group Elects Officers at Meeting

At the meeting of the American Home Economics Association, held recently in Milwaukee, Frances Zuill was reelected president of the organization. The other officers elected at the meeting were: Essie Elliott, Los Angeles, vice president; Annette Herr, Amherst, Mass., secretary; H. Gale Turpin, Baltimore, treasurer; Lillian Peek, Austin, councillor-at-large, and Agnes Donham, Boston, controller.

Holds Trade Schools Offer Inferior Training

"Deplorably unrealistic and undemocratic" are the terms applied by Prof. David Snedden to plans for vocational education made by American educators, in an address at the summer session of Columbia University. The educational policies of "professionals" he described as far inferior to those established by laymen.

"Our present plans for vocational training are undemocratic," Professor Snedden pointed out, "because we actually do provide the most expensive and best system of professional-level school vocational education in the world in our professional colleges—but only for persons most favored by natural heredity and favorable financial environment; and because for the vast majority, embracing especially all of those of less than best native ability and endowment, we not only provide almost no fully functional school vocational education, but we complacently disregard the progressive changes in modern economic production which render historic apprenticeship methods less effectual, and 'pick-up' or 'trial and error' methods more wasteful and hazardous."

University of Virginia Receives Large Bequest

A bequest of $60,000 has been made the University of Virginia in the will of Edward Dean Richmond, investment banker and graduate of the university, who died recently. The university is also the contingent legatee of one-quarter the residuary estate.

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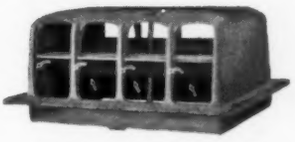

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NEWS OF THE MONTH

National Council on Schoolhouse Planning Will Meet in Milwaukee

The National Council on Schoolhouse Construction will meet in Milwaukee, September 18 to 20. H. W. Schmidt, Madison, Wis., president of the council, is preparing an interesting program that will cover pertinent features of schoolhouse planning. The programs of the council are rather unusual inasmuch as the members themselves provide virtually all the papers and reports.

Among the topics to be presented and discussed are reports on research regarding the influence of window spacing on desk lighting, the use of the photo-electric cell in schoolroom lighting, school plant insurance, economies in school building construction, reports on unit ventilation, legislation affecting schools, and a report on functional planning of school buildings.

This year a new feature is being introduced in the form of an "experience round table" where the group will act as a clearing house for typical experiences relating to practice, methods, materials and devices used by members during the past year.

A number of committees on codes, legislation, standards, mechanical systems and kindred matters will make reports.

The local committee under the direction of W. C. Bruce, secretary of the council, is working hard to make proper arrangements for the meeting. A visit to some of Milwaukee's new and up-to-date schools will be one feature; the ladies will also be entertained in a measure fitting the occasion. It is expected that a full attendance will be had especially in view of the proximity of A Century of Progress Exposition, at Chicago, which feature many of the members will, no doubt, wish to see.

Kentucky U. Successful in Placing Its Graduates

Approximately 95 per cent of the forty-four graduates in the college of commerce, University of Kentucky, in June, were employed before leaving the university. These young men and women cooperated with the college of commerce in "selling" themselves to various corporations and business concerns with the publication of a pamphlet called "Bargains in Brains," advertising their qualifications and aptitudes.

Production work, insurance, accounting, secretarial and executive work, credit investigation, personnel work and salesmanship are some of the fields which these young men and women have entered, and their employment reaches from coast to coast, part of which is due to the results procured through the pamphlet.

The conception of such a booklet is no more clever than its execution, and it is believed by executives in the college of commerce that the other six members of the class will receive employment before the summer has elapsed, twelve direct contacts, leading to positions, having resulted from the circulation of the pamphlet, "Bargains in Brains."

Various colleges of the University of Kentucky have made group efforts to place their graduates with marked success, while the placement bureau is a service bureau for all the colleges and the graduate school which has placed thirty-four teachers for the coming school year.

Boston Makes 13 Per Cent Cut in School Budget

A saving in school expenditures amounting to about 13 per cent and representing $1.40 in the tax rate is provided in the 1933 budget approved on July 13 by the school committee, Boston.

The total appropriation amounts to $15,210,145, as against $17,409,293 last year, or a saving of $2,199,148, to which must be added contributions to the city by school employees of $278,109 for a total saving of $2,477,257.

In only three items were increases noted—pensions to veterans and to teachers, evidence of the large number of retirements, and to the department of extended use of the schools, in response to public demand for greater use of school buildings. The increase for these items is $14,588.

The decreases were apportioned as follows: general school purposes, $1,606,978; alterations and repairs of school buildings, $210,739, and new school buildings, $381,429. Salary reductions which are included in general school purposes totaled $1,381,000 for the year, while other savings were $818,147.

Educational Films Attract Large Crowds at Fair

The two educational talking picture theaters operated by the University of Chicago Press at A Century of Progress Exposition, Chicago, are attracting capacity crowds at all performances, according to reports.

Four shows are given daily in the south lecture room of the Hall of Science and three shows are held daily in the lecture room of the same building. The program consists mainly of twenty-five pictures, including subjects on music, natural and physical science, and teacher training.

Private Schools Look for Increased Enrollments

Reports from 117 private schools throughout the country indicate a marked increase in enrollments for the coming term, according to a study just completed by the educational division of N. W. Ayer & Son, Inc. The schools reporting comprise military and non-military boys' institutions, girls' preparatory schools, girls' junior colleges, coeducational institutions and colleges.

More than 22 per cent of the schools expect full enrollments in the fall, as against only 13 per cent at this time last year. Nearly 79 per cent expect enrollments as good as those of last year.

On the basis of advance enrollments, military schools will show a larger increase than any other class of institution, as 72 per cent of this type of school now expect to have as many as or more students than last year. The greatest advances are in the Middle Atlantic states and the Far West.

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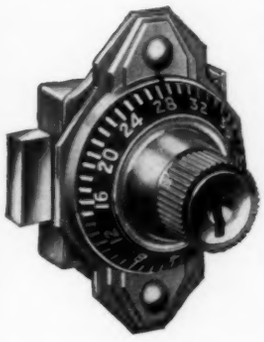

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In the Educational Field

CHARLES H. LAKE, since 1921 first assistant superintendent of schools, Cleveland, has been named superintendent, to succeed DR. R. G. JONES, who had headed the Cleveland schools since 1919.

J. R. MILES is now superintendent of schools, Covington, Tenn., succeeding W. T. ROBINSON.

DR. CHARLES MCKENNY, president, Michigan State Normal College, Ypsilanti, since 1912, was made president emeritus of the institution recently. JOHN M. MUNSON, formerly president of Northern State Teachers College, Marquette, Mich., succeeds DOCTOR MCKENNY at Ypsilanti.

H. E. MARQUETTE is the new superintendent of schools, Plankinton, S. D.

FLORENCE GREER, for the past ten years principal, Brooklyn Heights Seminary, Brooklyn, N. Y., died July 20. The Brooklyn Heights Seminary is the oldest educational institution in Brooklyn.

BYRON DACUS, formerly county superintendent of schools, Cordell, Okla., has been named president, Panhandle Agricultural and Mechanical College, Goodwell, Okla.

H. H. HAWLEY is the new superintendent of schools, Ludington, Mich., succeeding H. E. WAITS.

E. E. HARRISON is the new superintendent of schools, Raton, N. M.

HERBERT EVANS has been named superintendent of schools, La Grande, Ore., succeeding J. T. LONGFELLOW, who is now head of the school system at Oregon City, Ore.

JESSIE H. BINFORD, assistant superintendent of schools, Richmond, Va., since 1918, has been appointed to the superintendency.

JOHN W. SAHLSTROM has been named superintendent of schools, Elmira Heights, N. Y., succeeding H. H. BEACH.

J. W. FRAZIER is the new county superintendent of schools, Anderson, Ind., having recently succeeded O. W. JACKSON.

W. ROSS WHITWORTH has succeeded MILDRED J. CHAMBERS as superintendent of schools, Chautauqua County, Kansas.

H. F. HORNBY recently assumed the duties of superintendent of schools, Fond du Lac County, Wisconsin, succeeding M. J. LOWE who had served at the post for the past six years.

L. O. CALDWELL is the new superintendent of schools, Frazee, Minn.

B. U. COMALANDER has been elected superintendent of schools, Big Wells, Tex., succeeding the late J. W. GRISSOM.

AARON B. MURRAY, for the past three years superintendent of schools, Plain City, Ohio, will head the Georgetown, Ohio, schools during the coming year. R. C. FOX will succeed MR. MURRAY at Plain City.

L. E. GERBER has been appointed to succeed Barrett Lowe as superintendent of schools, Alcester, S. D.

MILO H. STUART, assistant superintendent of schools, Indianapolis, died July 24 after an illness of several weeks. MR. STUART served at one time as president, secondary school department, National Education Association, and also served one year as head of the association's secondary school principals department.

GLENN O. SWING will continue to head the public schools of Covington, Ky., having withdrawn his resignation.

CORWIN F. PALMER, who has been connected with educational systems as superintendent of schools for more than forty-five years, died recently at Mt. Vernon, N. Y. MR. PALMER was 85 years of age.

JOSEPH C. BROWN, formerly of Decatur, Neb., has been named superintendent of schools, Waco, Neb.

BEN H. WATT, formerly superintendent of schools, Owensville, Ind., has been appointed superintendent of schools, Noblesville, Ind.

J. A. FLEMING, formerly principal, Senior High School, Iola, Kan., has been named superintendent of schools, in that city.

R. OMAR DERRICK has succeeded J. W. BALLENTINE as superintendent of schools, Lexington, S. C.

HARRY B. HENDERSON, formerly superintendent of schools, Jackson County, Indiana, has been named head of the school system, Pekin, Ind.

WILLARD T. JONES has been appointed superintendent of schools, Ballston Spa, N. Y.

J. WENDELL EVANS, for the past four years superintendent of schools, Wilkesville, Ohio, has been appointed superintendent, Caldwell Exempted Village Schools, Gallipolis, Ohio.

C. E. SABIN has been appointed superintendent of schools, Watertown, N. Y.

FRANK STEPHENS will succeed EARL ROUSH as superintendent of schools, Akron, Ind. MR. ROUSH resigned recently to become superintendent of schools, Fulton County, Indiana.

ROY C. THOMPSON has been elected superintendent of schools, New Richmond, Ohio, succeeding F. E. DEAN.

ARTHUR S. ROLLINS has been named union superintendent of schools, Rochester, N. H.

EVERETT C. PRESTON has resigned as principal, Roosevelt School, New Rochelle, N. Y., to accept an administrative position in the schools of Belmont, Mass.

HUBERT SHANK has been appointed superintendent of schools, Kingman, Ohio.

RALPH VAN HOESEN has been appointed superintendent of secondary education for Michigan. MR. VAN HOESEN has been associated with the Michigan schools in a supervisory and administrative capacity for the past nine years.

JAMES W. VOSE, principal, Cushing Academy, Ashburnham, Mass., has resigned.

DR. ZENOS E. SCOTT, who resigned recently as superintendent of schools, Springfield, Mass., has been named president, Bridgewater State Teachers College.

SAMUEL L. DARST has been elected superintendent of schools, Botkins, Ohio, succeeding VICTOR BLANKE who has voluntarily transferred to the principalship in order to pursue research work.

DR. CHARLES H. ELLIOTT, commissioner of public education for New Jersey, has been reappointed by the governor for a five-year term, beginning July 1.